DVD HOME THEATER SYSTEM DVX-700

DVD CONTROLLER DVR-700

SUBWOOFER / SYSTEM CONTROL NS-PSW700

SPEAKERS NS-P700

SERVICE MANUAL

* The DVX-700 consists of the DVR-700, NS-PSW700 and NS-P700.
  When accepting a repair order from the user, it is recommended to receive DVR-700, NS-PSW700 and NS-P700 as a set for the repair work.
* When DVD MODULE P.C.B. of the DVR-700 is replaced, the serial number and new device key (ID number) MUST be reported to YCJ (Yamaha Corporation Japan) by email.

  Email: ycav-keycontrol@gmx.yamaha.com

  For more information, refer to “SERVICE PRECAUTIONS”.

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IMPORTANT NOTICE

This manual has been provided for the use of authorized YAMAHA Retailers and their service personnel.
It has been assumed that basic service procedures inherent to the industry, and more specifically YAMAHA Products, are already known and understood by the users, and have therefore not been restated.

WARNING: Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components, and failure of the product to perform as specified. For these reasons, we advise all YAMAHA product owners that any service required should be performed by an authorized YAMAHA Retailer or the appointed service representative.

IMPORTANT: The presentation or sale of this manual to any individual or firm does not constitute authorization, certification or recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research, engineering, and service departments of YAMAHA are continually striving to improve YAMAHA products. Modifications are, therefore, inevitable and specifications are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

IMPORTANT: Turn the unit OFF during disassembly and part replacement. Recheck all work before you apply power to the unit.

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101120

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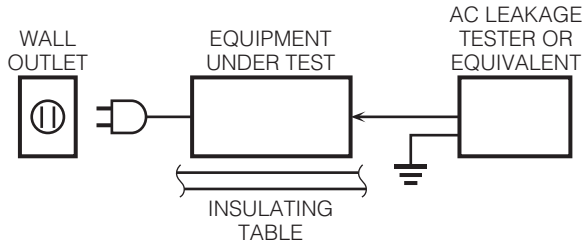
YAMAHA CORPORATION
P.O.Box 1, Hamamatsu, Japan
animate '08.12

■ TO SERVICE PERSONNEL

1. Critical Components Information
   Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
2. Leakage Current Measurement (For 120V Models Only)
   When service has been completed, it is imperative to verify that all exposed conductive surfaces are properly insulated from supply circuits.

- Meter impedance should be equivalent to 1500 ohms shunted by 0.15 µF.



- Leakage current must not exceed 0.5mA.
- Be sure to test for leakage with the AC plug in both polarities.

For U model

"CAUTION"

"F701: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 5A, 125V FUSE."

For C model

CAUTION

F701: REPLACE WITH SAME TYPE 5A, 125V FUSE.

ATTENTION

F701: UTILISER UN FUSIBLE DE RECHANGE DE MÉME TYPE DE 5A, 125V.

WARNING: CHEMICAL CONTENT NOTICE!

This product contains chemicals known to the State of California to cause cancer, or birth defects or other reproductive harm.

DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHATSOEVER!

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

About lead free solder

All of the P.C.B.s installed in this unit and solder joints are soldered using the lead free solder.

Among some types of lead free solder currently available, it is recommended to use one of the following types for the repair work.

- Sn + Ag + Cu (tin + silver + copper)
- Sn + Cu (tin + copper)
- Sn + Zn + Bi (tin + zinc + bismuth)

Caution:

As the melting point temperature of the lead free solder is about 30°C to 40°C (50°F to 70°F) higher than that of the lead solder, be sure to use a soldering iron suitable to each solder.

WARNING: Laser Safety

This product contains a laser beam component. This component may emit invisible, as well as visible radiation, which may cause eye damage. To protect your eyes and skin from laser radiation, the following precautions must be used during servicing of the unit.

1) When testing and/or repairing any component within the product, keep your eyes and skin more than 30 cm/1 feet away from the laser pick-up unit at all times. Do not stare at the laser beam at any time.
2) Do not attempt to readjust, disassemble or repair the laser pick-up, unless noted elsewhere in this manual.
3) CAUTION: Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Laser Emitting conditions:

1) When the Top Cover is removed, and the STANDBY/ON SW is turned to the “ON” position, the laser component will emit a beam for several seconds to detect if a disc is present. During this time (5-10 sec.) the laser may radiate through the lens of the laser pick-up unit. Do not attempt any servicing during this period!

   If no disc is detected, the laser will stop emitting the beam. When a disc is loaded, you will not be exposed to any laser emissions.

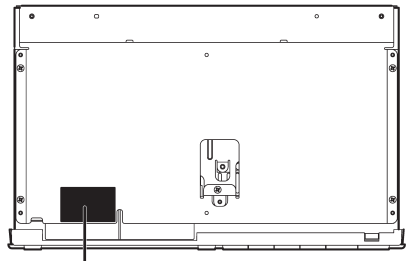
2) The laser power level can be adjusted with the VR on the pick-up PWB, however, this level has been set by the factory prior to shipping from the factory. Do not adjust this laser level control unless instruction is provided elsewhere in this manual. Adjustment of this control can increase the laser emission level from the device.

Laser Diode Properties

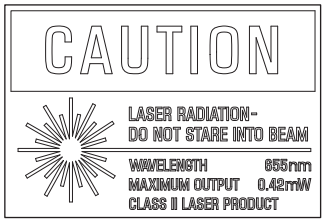
Type:	Semiconductor laser ALGaInP	Output Power:	5 mW (DVD) / 7 mW (VCD/CD)
Wave length:	655 nm (DVD) / 790 nm (VCD/CD)	Beam divergence:	20 degrees

● The name plate is located on the rear panel of the DVD controller.
● La plaque signalétique se trouve sur le panneau arrière du lecteur de DVD.

Without top cover
Sans couvercle supérieur

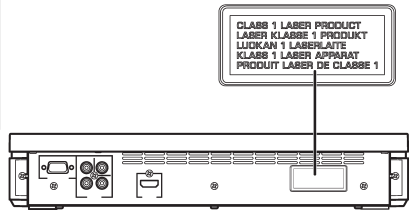


U, C models



A, G, F, L, V models

CAUTION - CLASS 3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
VARNING - KLASS 3B SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. STRÅLEN ÄR FARLIG.
VARO ! AVATTAESSA OLET ALTTIINA LUOKAN 3B NÄKYVÄLLE JA NÄKYMÄTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING - KLASS 3B SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN.
VORSICHT ! SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG KLASSE 3B WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
ATTENTION - RADIATION VISIBLE ET INVISIBLE CLASSE 3B LORSQUE L'APPAREIL EST OUVERT. EVITEZ TOUTE EXPOSITION AU FAISCEAU.



Warning for power supply

The primary side of the power supply carries live mains voltage when the player is connected to the mains even when the player is switched off !

This primary area is not shielded so it is possible to accidentally touch copper tracks and/or components when servicing the player.

Service personnel have to take precautions to prevent touching this area or components in this area.

Note:

The screws on the DVD mechanism may never be touched, removed or re-adjusted.
Handle the DVD mechanism with care when the unit has to be exchanged!
The DVD mechanism is very sensitive for dropping or giving shocks.

■ PREVENTION OF ELECTROSTATIC DISCHARGE

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

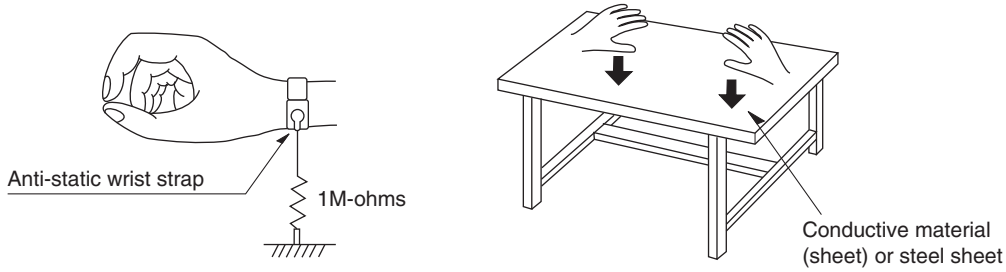
   CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as brushing together of your fabric clothes or lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

Grounding for electrostatic breakdown prevention

1. Human body grounding.
   Use the antistatic wrist strap to discharge the static electricity from your body.
2. Work table grounding.
   Put a conductive material (sheet) or steel sheet on the area where the optical pickup is placed and ground the sheet.

Caution:

The static electricity of your clothes will not be grounded through the wrist strap. So take care not to let your clothes touch the optical pickup.



■ REGION MANAGEMENT INFORMATION

Region Management Information: This DVD player is designed and manufactured to respond to the Region Management Information that is recorded on a DVD disc. If the Region number described on the DVD disc does not correspond to the Region number of this DVD player, this DVD player cannot play this disc.

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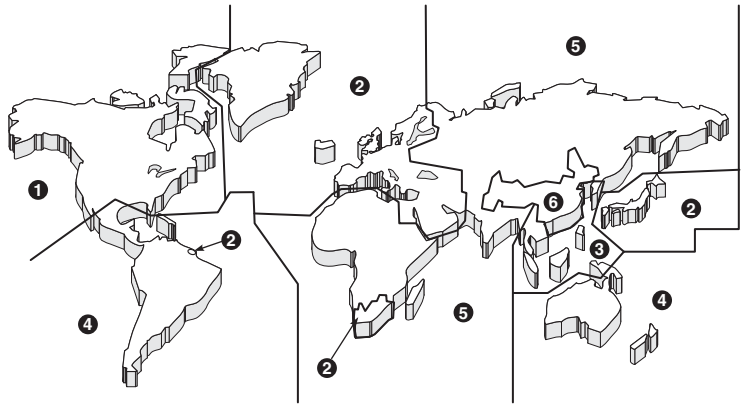
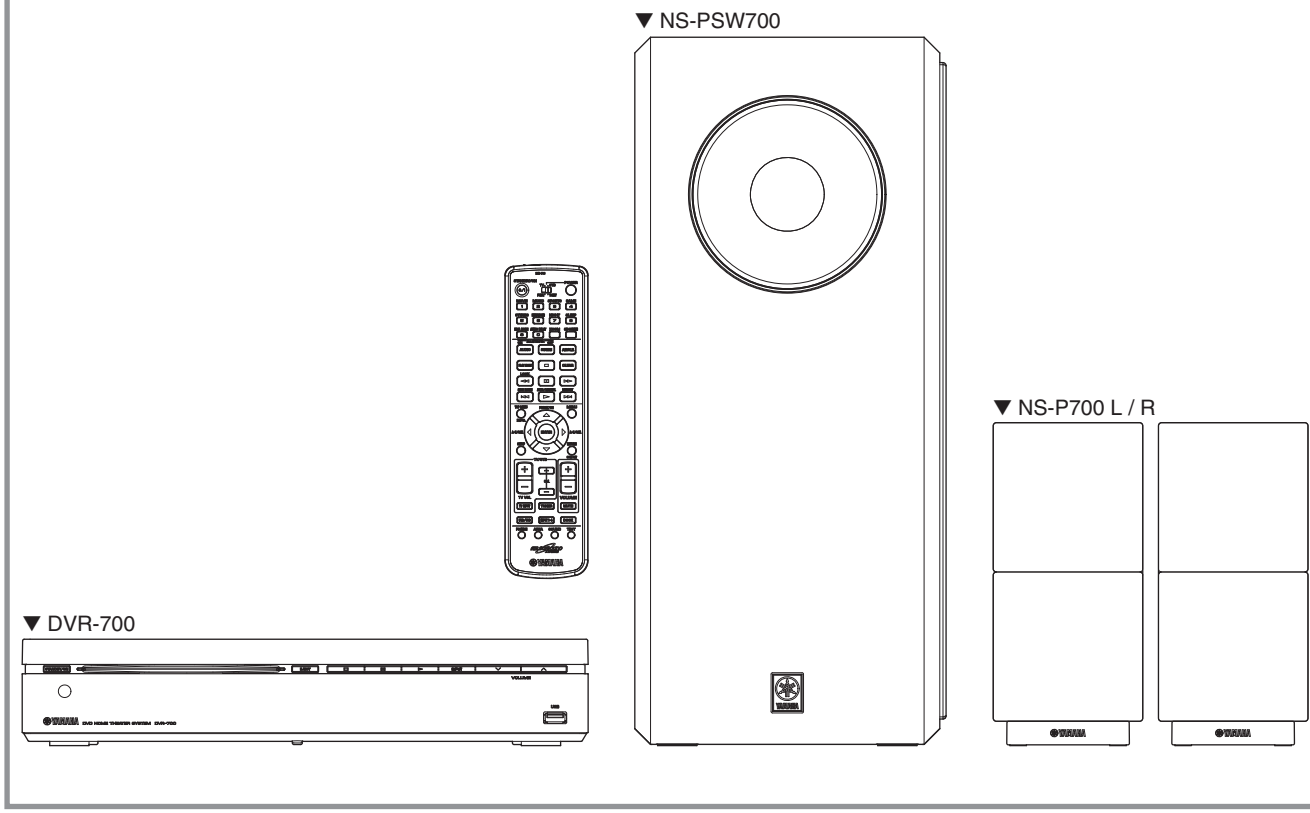


■ SYSTEM COMPOSITION

The DVX-700 consists of the DVR-700, NS-PSW700 and NS-P700.

DVX-700



■ FRONT PANELS

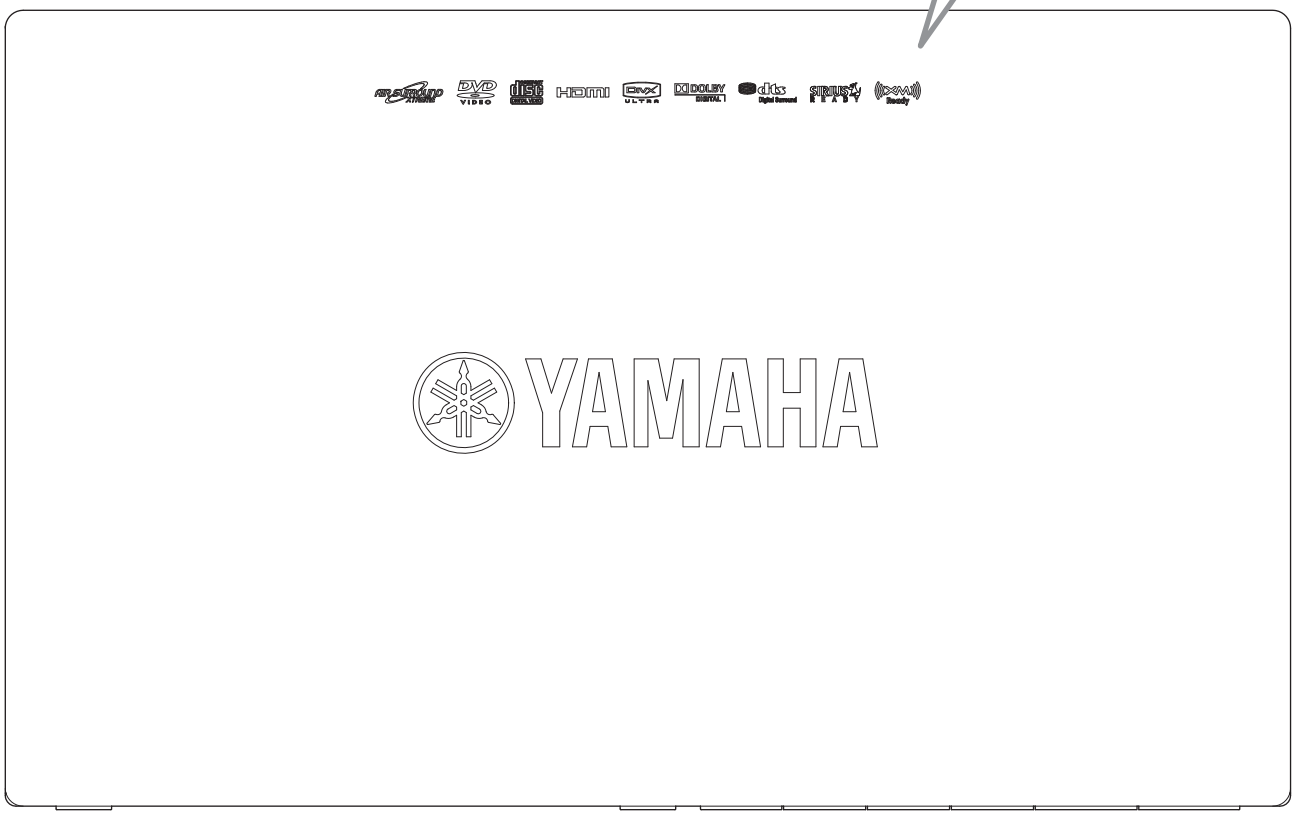
DVR-700

U, C, A, G, F, L, V models

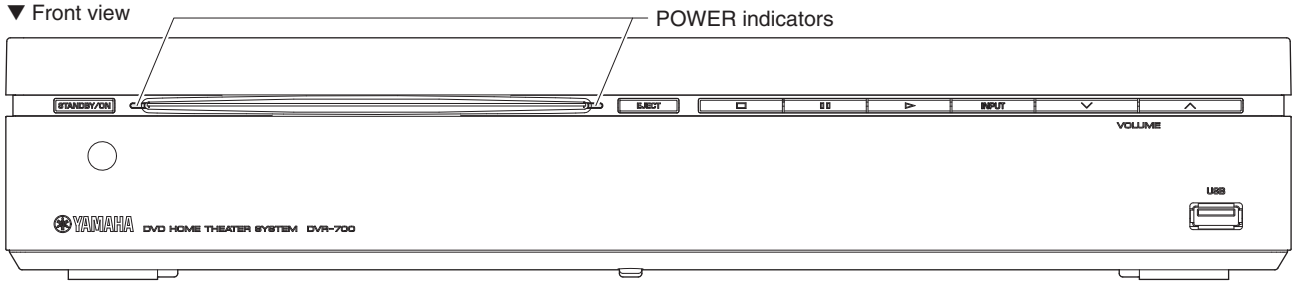
(U, C model)

(A, G, F, L, V models)

▼ Top view



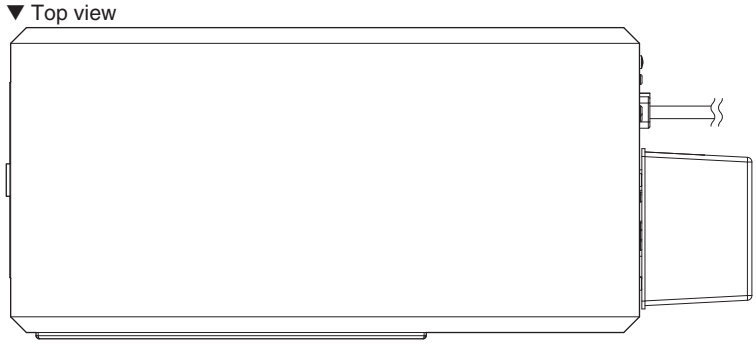
▼ Front view



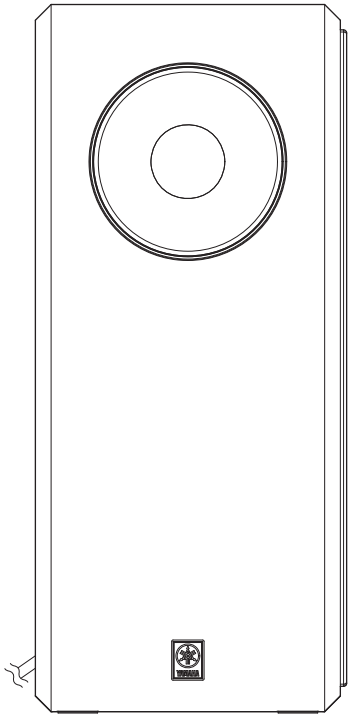
NS-PSW700

U, C, A, G, F, L, V models

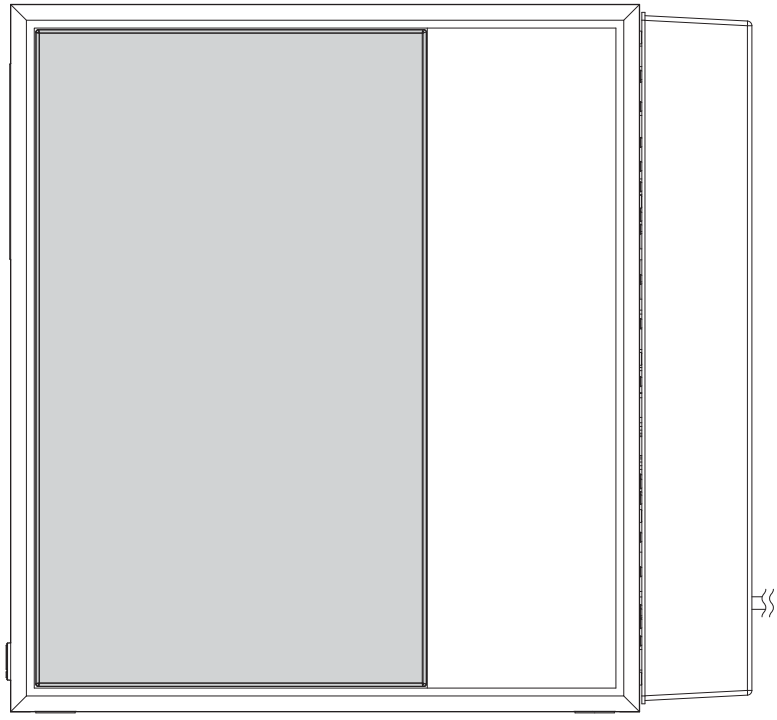
▼ Top view



▼ Front view



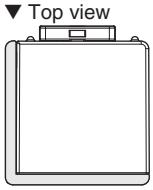
▼ Side view



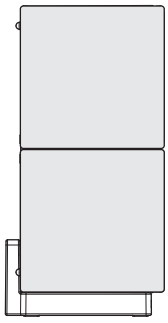
NS-P700

NS-P700 L

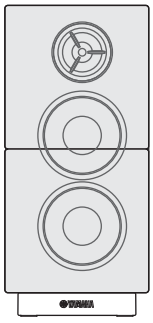
▼ Top view



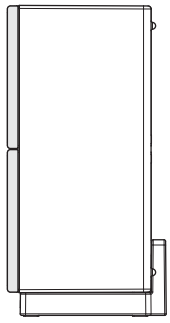
▼ Side view



▼ Front view

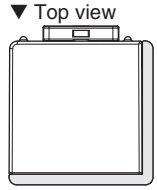


▼ Side view

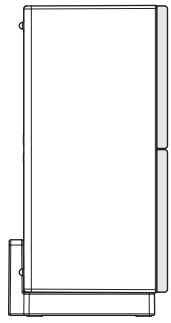


NS-P700 R

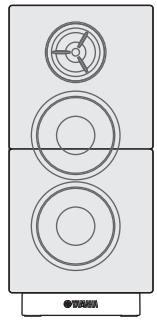
▼ Top view



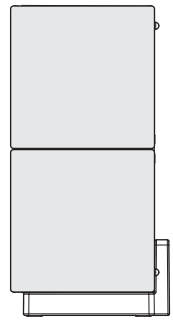
▼ Side view



▼ Front view



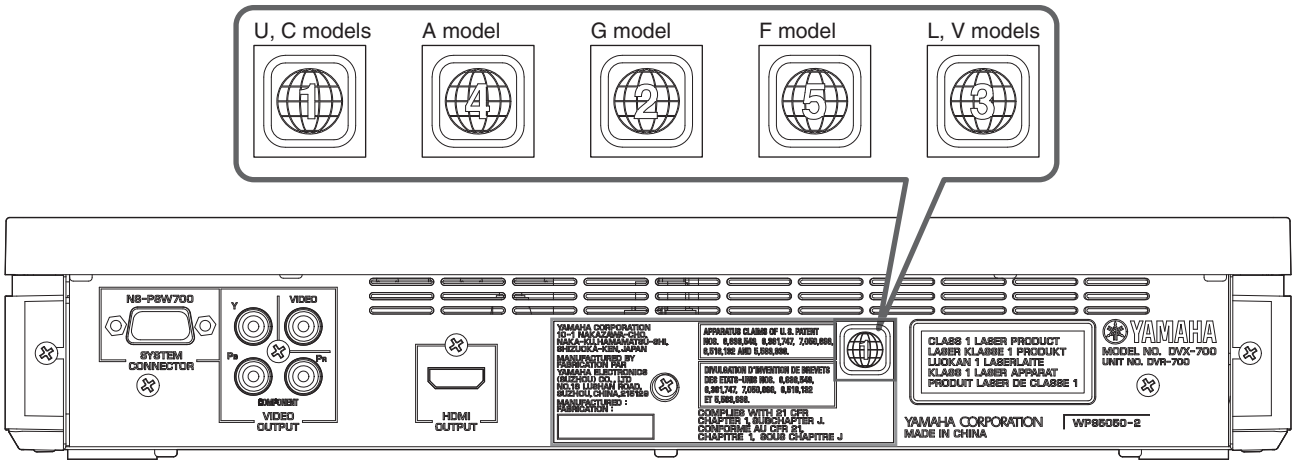
▼ Side view



■ REAR PANELS

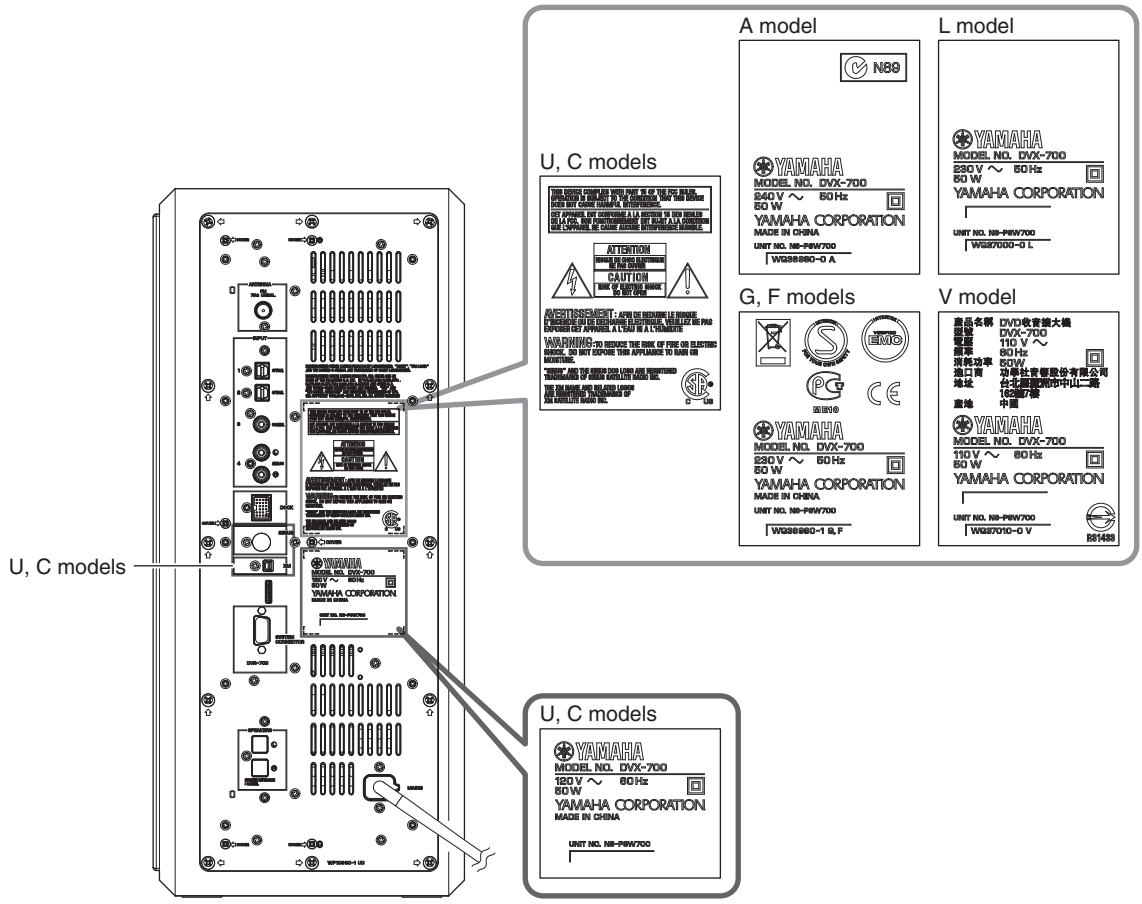
DVR-700

U, C, A, G, F, L, V models



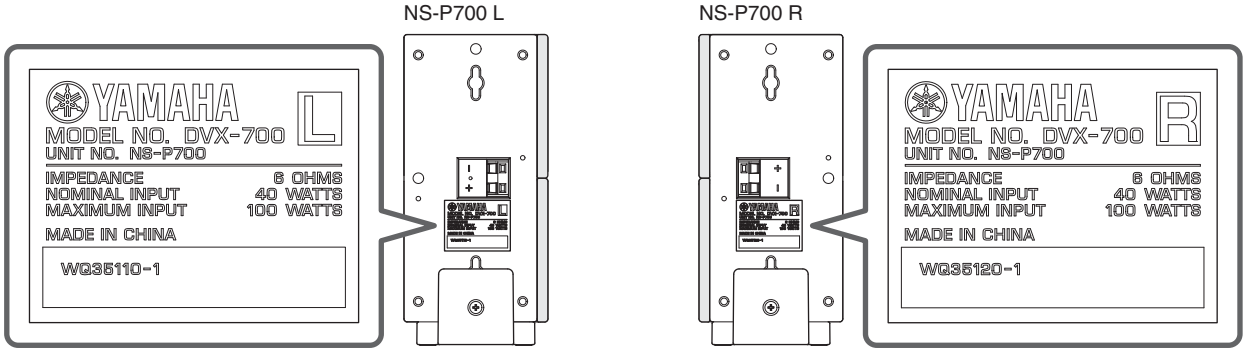
NS-PSW700

U, C, A, G, F, L, V models



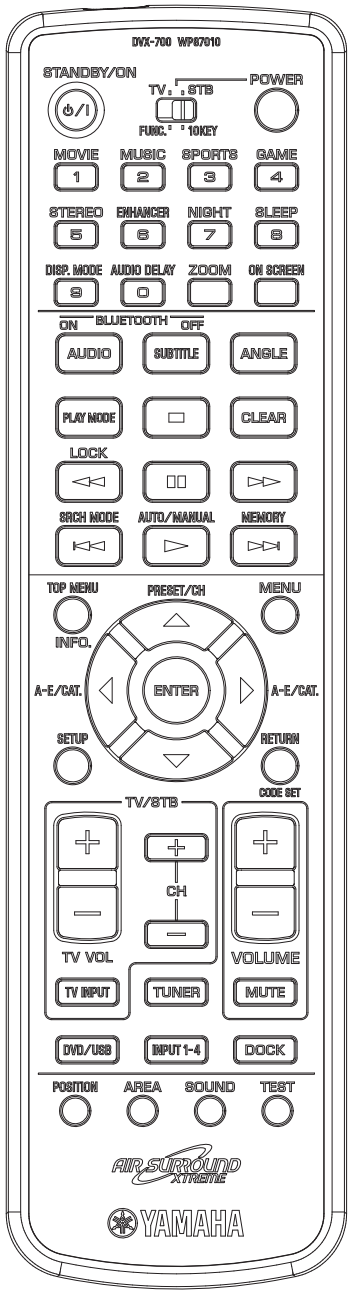
NS-P700

U, C, A, G, F, L, V models

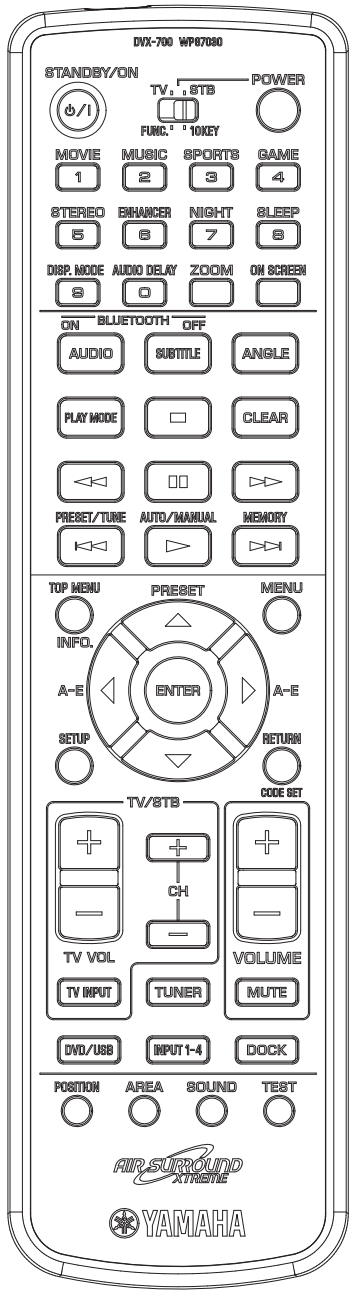


■ REMOTE CONTROL PANELS

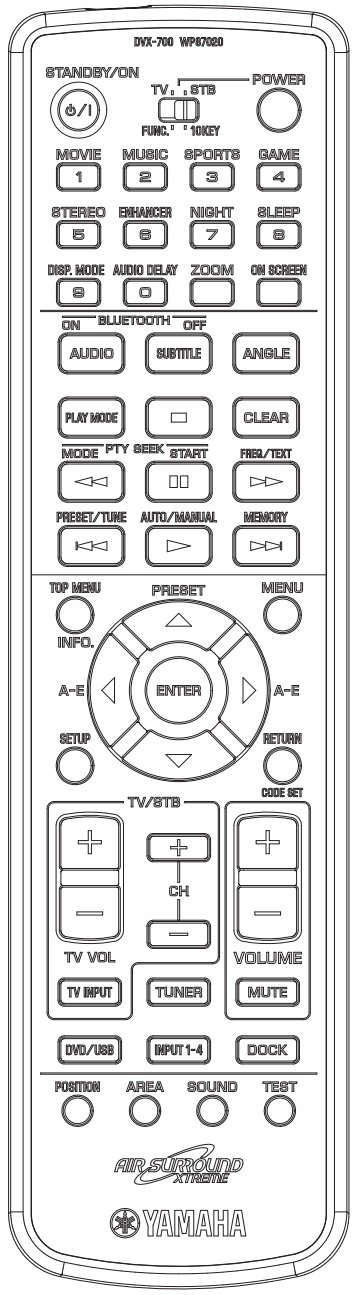
U, C models



A, L, V models



G, F models



■ SPECIFICATIONS

DVR-700

■ Input/Output Section

Input Terminal
Others .....USB

Output Terminal
Video .....VIDEO (composite)
COMPONENT (Y, P_B, P_R)
HDMI
Others .....SYSTEM CONNECTOR

■ General

Dimensions (W x H x D)
.....360 mm x 68 mm x 224 mm
(14-3/16" x 2-11/16" x 8-13/16")

Weight .....2.6 kg (5 lbs. 11 oz.)

Finish
Black color .....U, C, A, G, F, L, V models

NS-PSW700

■ Speaker Section

Type .....Bass reflex speaker system
Magnetic shielding type

Driver
Woofer ..... 16 cm (6-5/16") cone type x 1

Frequency Response
..... 35 Hz to 130 kHz (-10dB)

■ Input/Output Section

Input Terminal
Analog audio ..... INPUT4 (AUX L/R: pin jack)
Digital audio .....INPUT1, 2 (OPTICAL)
INPUT3 (COAXIAL)
Others .....DOCK (YDS-10, YDS-11, YBA-10)
FM antenna terminal
XM tuner (U, C models)
SIRIUS tuner (U, C models)

Output Terminal
Analog audio .....SPEAKERS L/R
Others .....SYSTEM CONNECTOR

■ General

Power Supply
U, C models ..... AC 120 V, 60 Hz
A model ..... AC 240 V, 50 Hz
G, F, L models ..... AC 230 V, 50 Hz
V model ..... AC 110 V, 60 Hz

Power Consumption
.....50 W

Standby Power Consumption (reference data)
.....Less than 1 W

Dimensions (W x H x D)
Excluding legs .....194 mm x 450 mm x 400 mm
(7-5/8" x 17-11/16" x 15-3/4")

Weight .....13 kg (28 lbs. 10 oz.)

Finish
Black color .....U, C, A, G, F, L, V models

NS-P700

■ Speaker Section

Type .....Magnetic shielding type

Driver
Woofer ..... 5.5 cm (2-3/16") cone type x 2
Tweeter .....2.5 cm (1") balanced dome type x 1

Frequency Response
..... 130 Hz to 20 kHz (-10dB)

Input Power
Nominal ..... 40 W
Maximum ..... 100 W

■ General

Dimensions (W x H x D)
Excluding stands
.....95 mm x 190 mm x 98 mm
(3-3/4" x 7-1/2" x 3-7/8")
Including stands
Upright position
.....95 mm x 206 mm x 106 mm
(3-3/4" x 8-1/8" x 4-3/16")
Horizontal position
.....190 mm x 111 mm x 106 mm
(7-1/2" x 4-3/8" x 4-3/16")

Weight (Excluding stands)
.....1.2 kg (2 lbs. 10 oz.)

Finish
Black color .....U, C, A, G, F, L, V models

■ Amplifier Section

Maximum Power (JEITA, 6 ohms, 10 % THD)
SP OUT (1 kHz) ..... 70 W
SUBWOOFER (100 Hz) ..... 70 W

Minimum RMS Output Power (6 ohms, 1 % THD)
SP OUT (1 kHz) ..... 55 W
SUBWOOFER (100 Hz) ..... 55 W

Input Sensitivity/Input Impedance
AUX ..... 350 mV/32 k-ohms

Maximum Input Signal Level (1 kHz, DSP=Thru)
AUX .....2.2 V or more

Frequency Response (Analog, Digital input)
SP OUT ..... -2.0 ±1 dB (20 Hz)
0 dB (1 kHz)
-0.5 ±1 dB (20 kHz)

Signal to Noise Ratio (IHF-A network)
SP OUT
Analog .....82 dB or more
Digital .....98 dB or more

Total Harmonic Distortion
(Analog, Digital 20 kHz-LPF, 1 kHz, 18.5 V/6 ohms)
SP OUT .....0.06 % or less

Residual Noise
(Analog, Digital 20 kHz-LPF, 1 kHz, 18.5 V/6 ohms)
SP OUT ..... 138 µV

■ DVD Section

Video Output

Composite .....1 Vp-p (75 ohms)

Y Output/Component Video Output

Component .....1 Vp-p (75 ohms)

Pb Output/Component Video Output

Component .....0.7 Vp-p (75 ohms)

Pr Output/Component Video Output

Component .....0.7 Vp-p (75 ohms)

■ Tuner Section

FM Tuning Range

U, C models ..... 87.50 to 107.90 MHz
A, G, F, L, V models ..... 87.50 to 108.00 MHz

* G, F models: RDS function 75 ohms unbalanced

■ Other Section

Sound Field (MOVIE, MUSIC, SPORTS, GAME)

.....Surround mode
Night listening mode
Extended stereo
Compressed music enhancer

Virtual Surround Processor

.....AIR SURROUND XTREME

Audio Decode

.....Dolby Digital
Dolby Pro Logic II
DTS
MPEG2

Speakers Distance Mode

.....Wide / Normal / Narrow

■ General

Accessories

Remote control ..... x 1
Battery (R6, AA, UM-3) ..... x 2
Indoor FM antenna (1.4 m) ..... x 1
Speaker cable ass'y (4 m) ..... x 2
System cable (4 m) ..... x 1
Video pin cable (1.5 m) ..... x 1
Cover (for NS-PSW700) ..... x 1
Screw (for cover / 3x6) ..... x 6
Stand (for NS-P700) ..... x 2
Nonskid pad (for stand) ..... x 18
Screw (for stand / 4x10) ..... x 2

* Specifications are subject to change without notice due to product improvements.

U .....U.S.A. model
C .....Canadian model
A .....Australian model
G .....European model
F ..... Russian model
L .....Singapore model
V ..... Taiwan model

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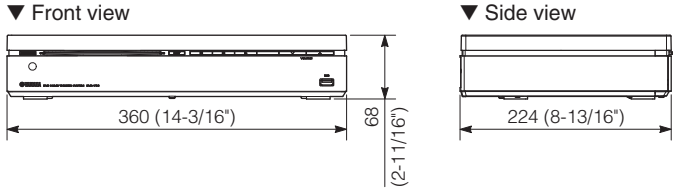
AIR SURROUND XTREME

This system employs new technologies and algorithms that make it possible to achieve 7-channel surround sound with only two speakers, and without using wall reflections.

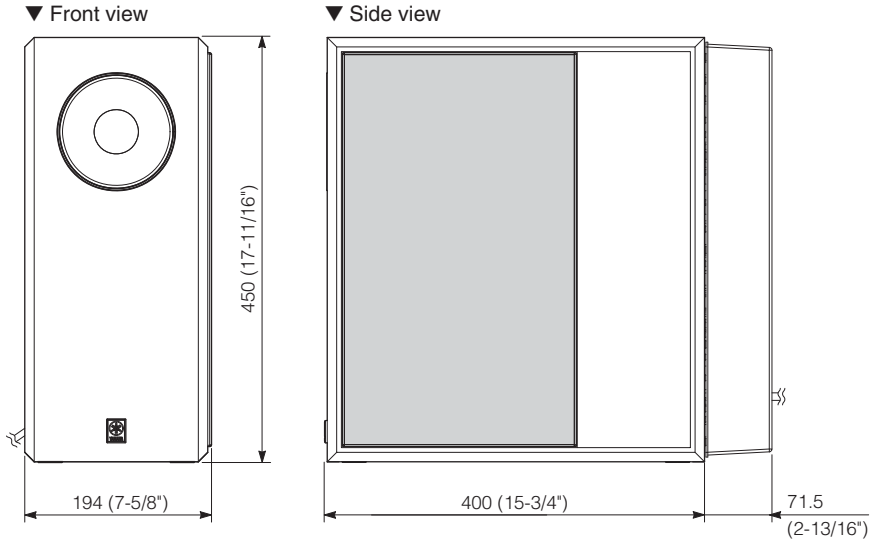
- **DIMENSIONS**

DVR-700



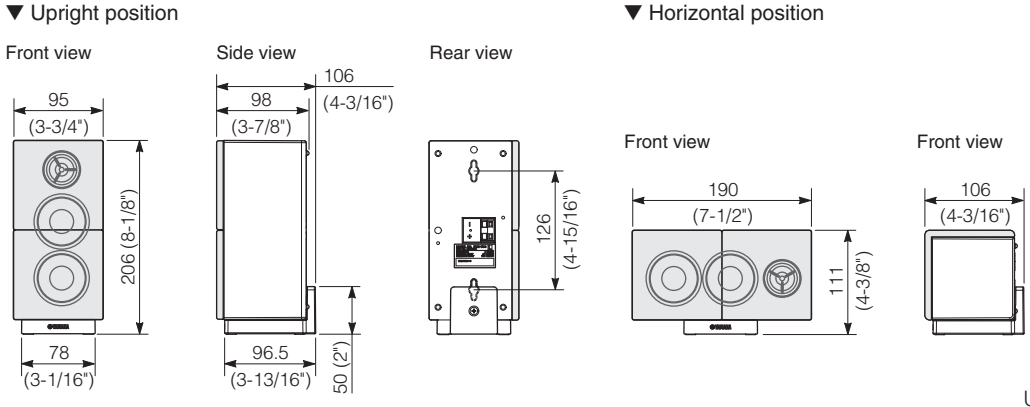
Unit: mm (inch)

NS-PSW700



Unit: mm (inch)

NS-P700

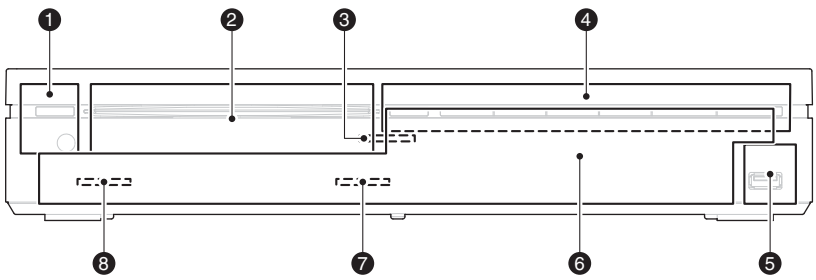


Unit: mm (inch)

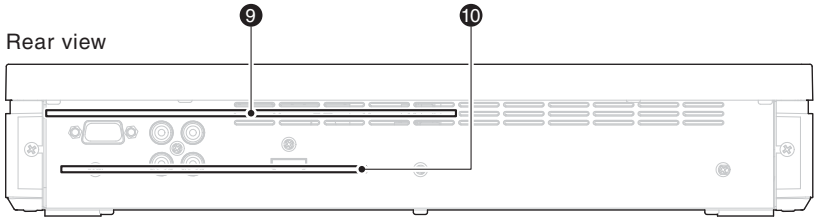
■ INTERNAL VIEW

DVR-700

Front view



Rear view

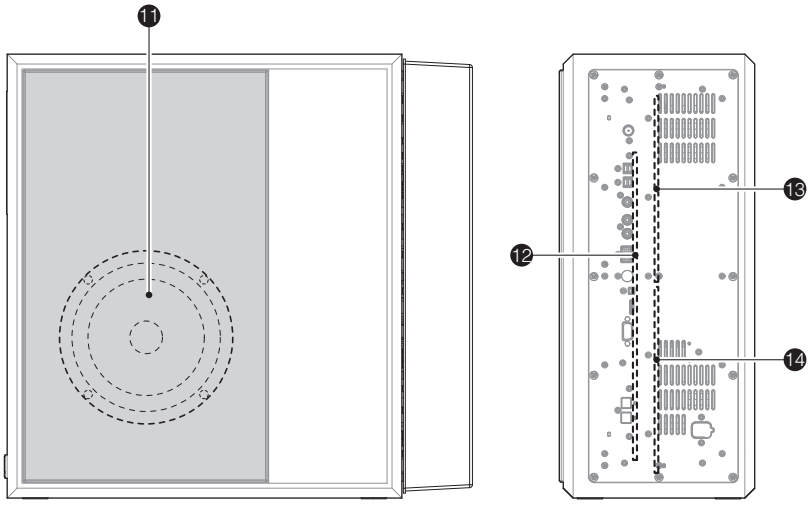


1. OPERATION (4) P.C.B.
2. DVD MECHANISM UNIT
3. OPERATION (3) P.C.B.
4. OPERATION (2) P.C.B.
5. FRONT (2) P.C.B.
6. OPERATION (1) P.C.B.
7. OPERATION (6) P.C.B.
8. OPERATION (5) P.C.B.
9. FRONT (1) P.C.B.
10. DVD MODULE P.C.B.

NS-PSW700

Side view

Rear view



11. DRIVER WOOFER
12. MAIN P.C.B.
13. SUB P.C.B.
14. POWER P.C.B.

■ SERVICE PRECAUTIONS

When DVD MODULE P.C.B. of the DVR-700 is replaced, the serial number and new ID number (device key) must be reported to YCJ (Yamaha Corporation Japan) by email. (Fig. 1)

Email: ycav-keycontrol@gmx.yamaha.com

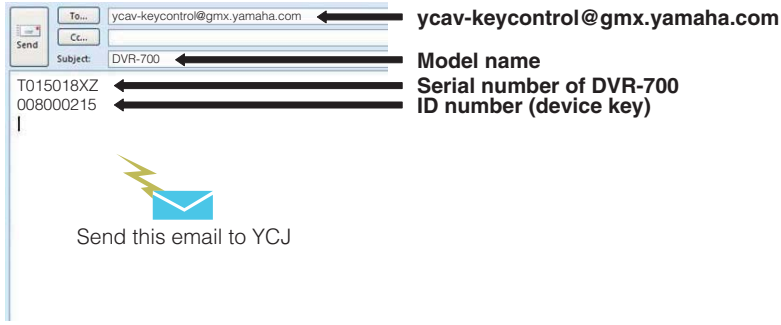


Fig. 1

● Check the Serial Number

The serial number “SER.No.xxxxxxx” can be found at the rear panel of the DVR-700. (Fig. 2)

DVR-700 Rear view

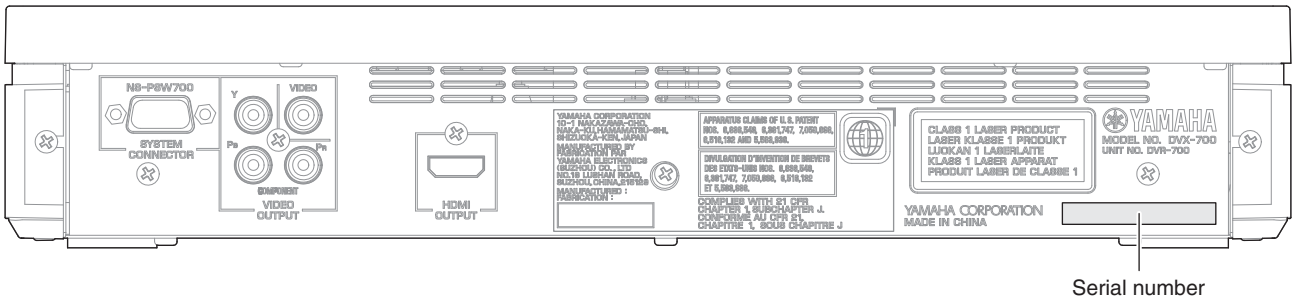


Fig. 2

● Check the New ID Number (Device key)

Connection

Connect the VIDEO OUT terminal of DVR-700 to the VIDEO IN terminal of the TV monitor with a video pin cable.

Operation Procedure

Perform following steps while watching the TV monitor screen and using the keys on the remote control.

1. With this unit in the standby mode, press the keys on the remote control in the order as shown below.
   The self-diagnostic function is activated. (Fig. 3)

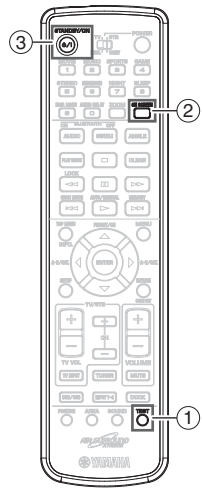


Fig. 3

2. Press " ▽ (down) " key once to select main menu 22 DVD SETTING.
3. Press " ▷ (right) " key twice to select sub-menu 22-3 DVD ID CLR.

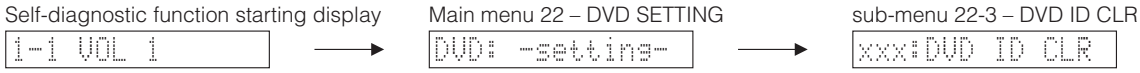

Self-diagnostic function starting display
1-1 VOL 1
Main menu 22 – DVD SETTING
DVD: -setting-
sub-menu 22-3 – DVD ID CLR
xxx:DVD ID CLR

Fig. 4

4. Press "ENTER" key once. Wait about 15 seconds.
5. New ID number (device key) will appear on TV monitor screen as shown below.
   Note: While the ID number is displayed, never operate any keys on the remote control.

(Player's ID Number Setting)
ID Number ?
0 0 8 0 0 0 2 1 5
Compare
* * * * * * * * *
<CLEAR>
Exit
Input ID Number !
New ID number (device key)
* The displayed "008000215" is an example.

Fig. 5

6. To exit the self-diagnostic function, press "STANDBY/ON" key to turn off the power.

■ DVR-700 DISASSEMBLY PROCEDURES

(Remove parts in the order as numbered.)

1. Removal of Top Cover

a. Remove 3 screws (①). Remove the side panel L. (Fig. 1)

b. Remove 3 screws (②). Remove the side panel R. (Fig. 1)

c. Remove 7 screws (③). (Fig. 2)

d. Release a hook. Remove the top cover. (Fig. 1)

2. Removal of Frame Top

a. Remove 7 screws (④). (Fig. 1)

b. Remove 2 screws (⑤). (Fig. 2)

c. Remove the frame top. (Fig. 1)

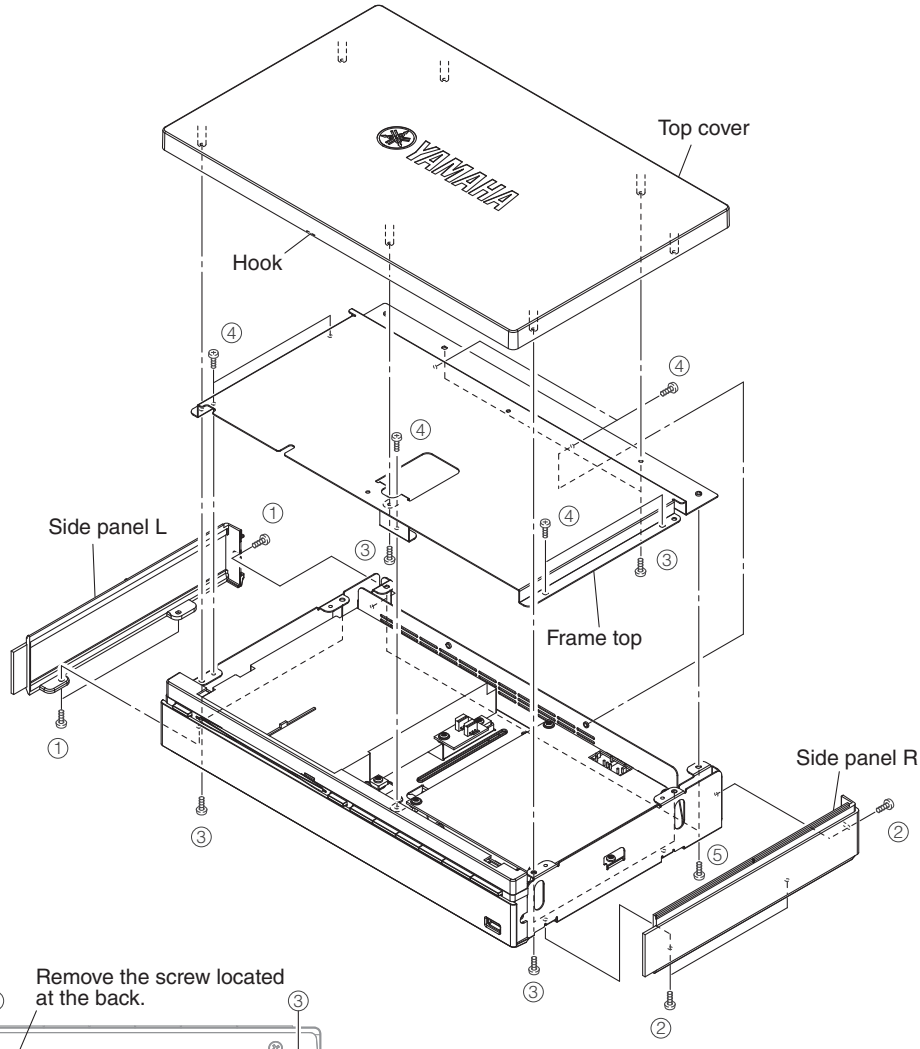


Fig. 1

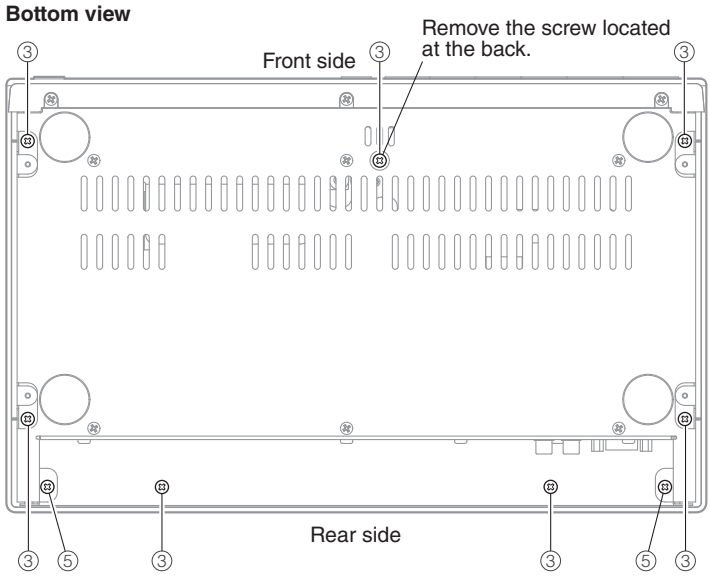


Fig. 2

3. Removal of FRONT (1) P.C.B.

a. Remove 4 screws (⑥). (Fig. 3)
b. Remove screw (⑦) and 2 jack screws (⑧). (Fig. 4)
c. Turn over the FRONT (1) P.C.B.. (Fig. 3)
d. Remove CB301, CB304-305, CB311, CB313-315, CB317, CB319 and CB320-321. (Fig. 3)
e. Remove the FRONT (1) P.C.B.. (Fig. 3)

4. Removal of Front Panel Ass'y

a. Remove 3 screws (⑨) and screw (⑩). (Fig. 3)
b. Release a hook. Remove the front panel ass'y. (Fig. 3)

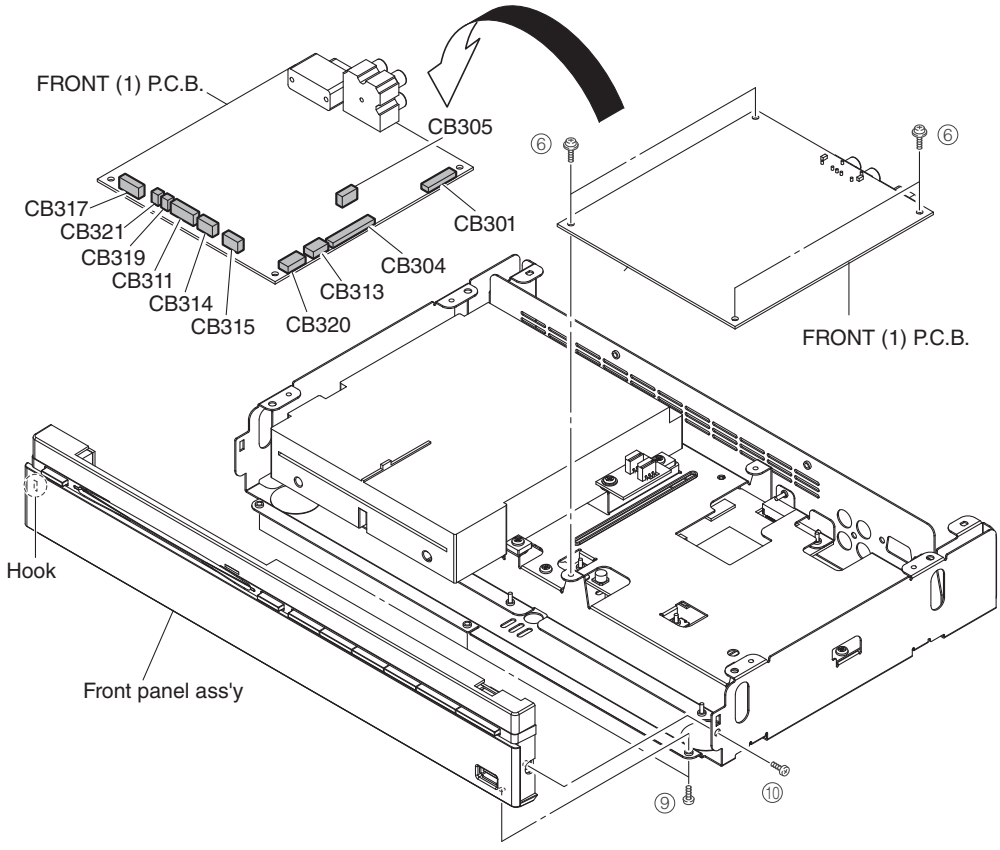


Fig. 3

Rear view

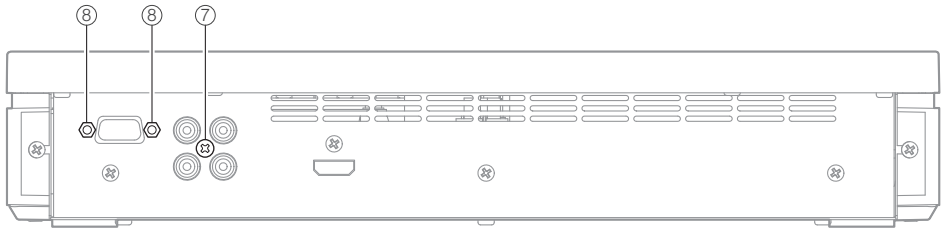


Fig. 4

5. Removal of DVD Mechanism Unit and DVD module P.C.B.

a. Remove 6 screws (⑪) and 2 screws (⑫). (Fig. 5)
b. Remove the DVD mechanism unit , DVD module P.C.B. and frame PCB together. (Fig. 5)
c. Remove CB9 and CN965. (Fig. 5)
d. Remove CN966, and ground the terminal side of the flexible flat cable with a clip or the like. (Fig. 5)
e. Remove 4 screws (⑬). (Fig. 5)
f. Remove the DVD mechanism unit. (Fig. 5)
g. Remove 4 screws (⑭) and screw (⑮). Fig. 5)
h. Remove CN964. (Fig. 5)
i. Remove the DVD module P.C.B.. (Fig. 5)

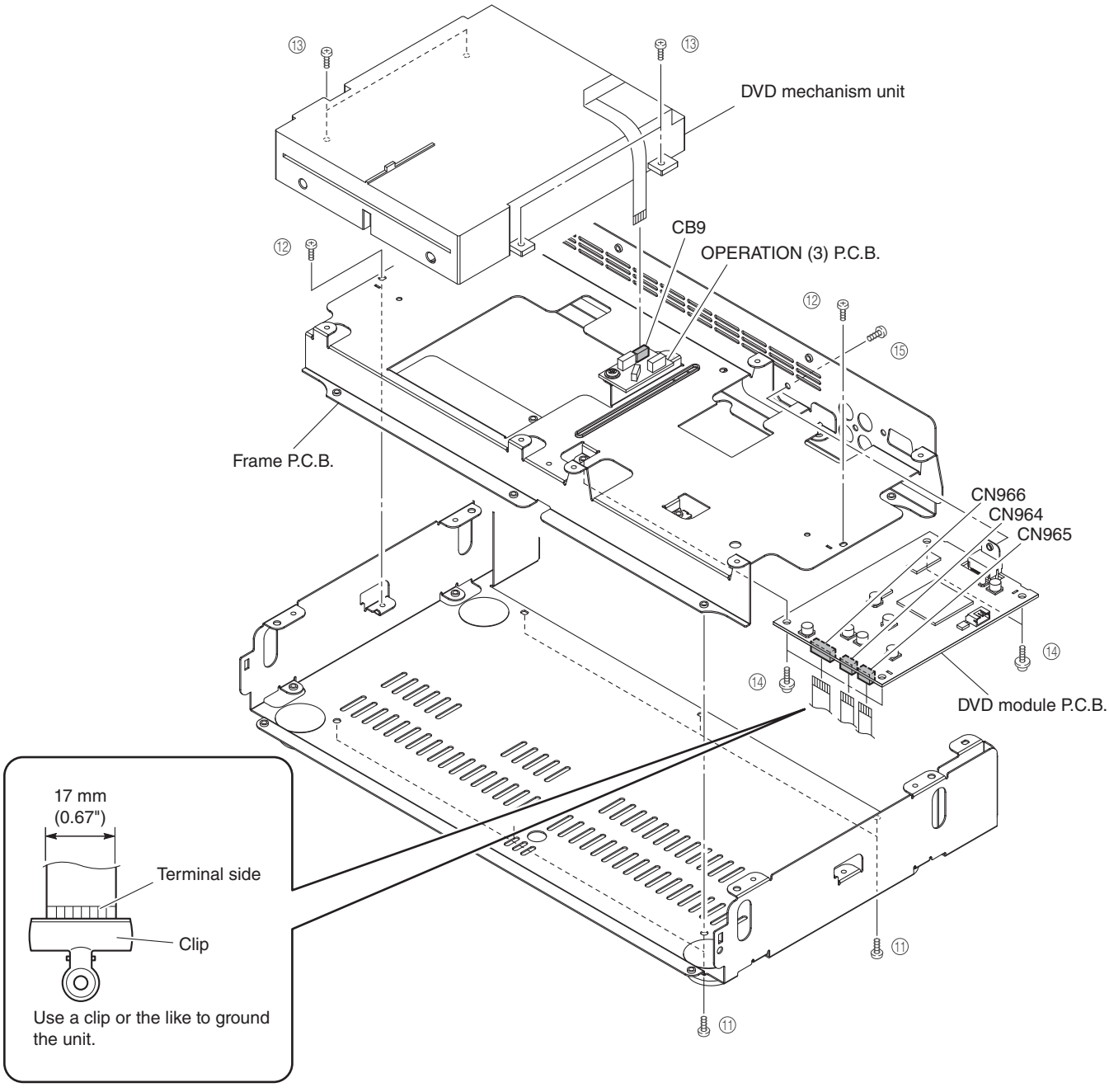


Fig. 5

■ NS-PSW700 DISASSEMBLY PROCEDURES

(Remove parts in the order as numbered.)
Disconnect the power cable from the AC outlet.

1. Removal of Side Grille Ass'y

* The side grille ass'y is fixed to the NS-PSW700 cabinet ass'y with dowels at 7 locations. As a flatblade screwdriver is used for removal, use special care not to cause damage to the NS-PSW700 cabinet ass'y.

a. First, insert a flatblade screwdriver at 3 dowel positions and push up the side grille ass'y. (Fig. 1)
b. Next, using the metalblade or the like, push the side grille ass'y upward until it comes off. (Fig. 1)

Note:

- Removing the side grille ass'y with the flatblade screwdriver only without using the metalblade or the like may cause damage to the side grille ass'y.
- When installing the side grille ass'y, apply quick-drying bond or the like to dowels and then fit them into dowel holes for secure installation.
  (The side grille ass'y will come off easily if its dowels are fitted into dowel holes without applying quick-drying bond or the like.)

2. Removal of Driver Woofer

a. Remove 4 screws (①). (Fig. 2)
b. Pull out the driver woofer.
c. Disconnect the connector connected to the terminal of the driver woofer. (Fig. 2)
d. Remove the driver woofer. (Fig. 2)

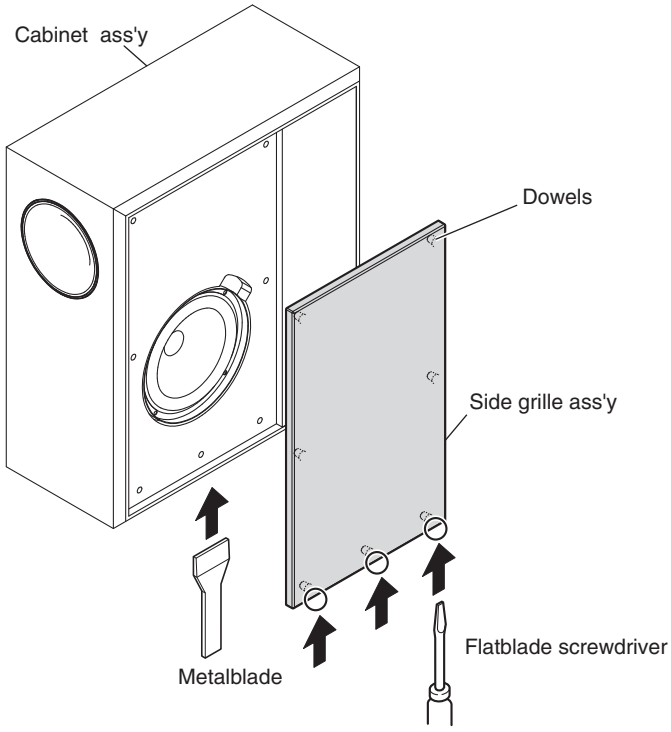


Fig. 1

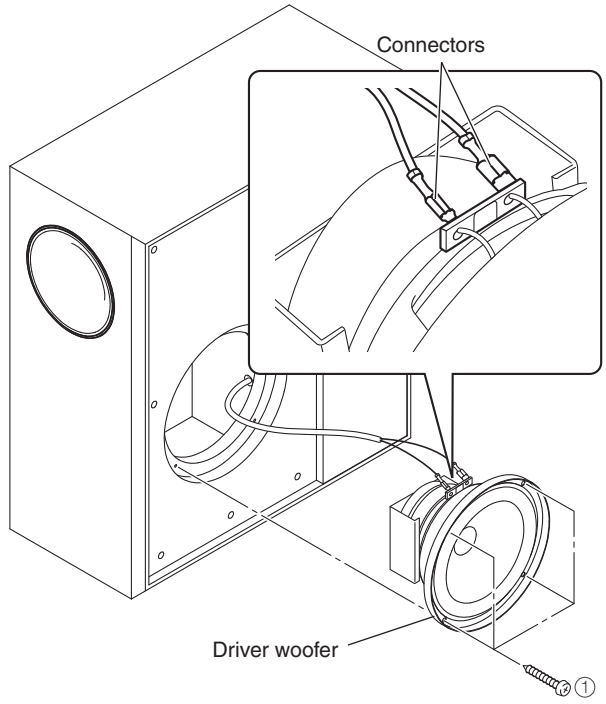


Fig. 2

3. Removal of Cover

*** If the cover (accessory) is installed, remove it first.**

a. Remove 6 screws (②). (Fig. 3)

*** Screws (②) are identified with arrow marks (COVER ⇨).**

b. Remove the cover. (Fig. 3)

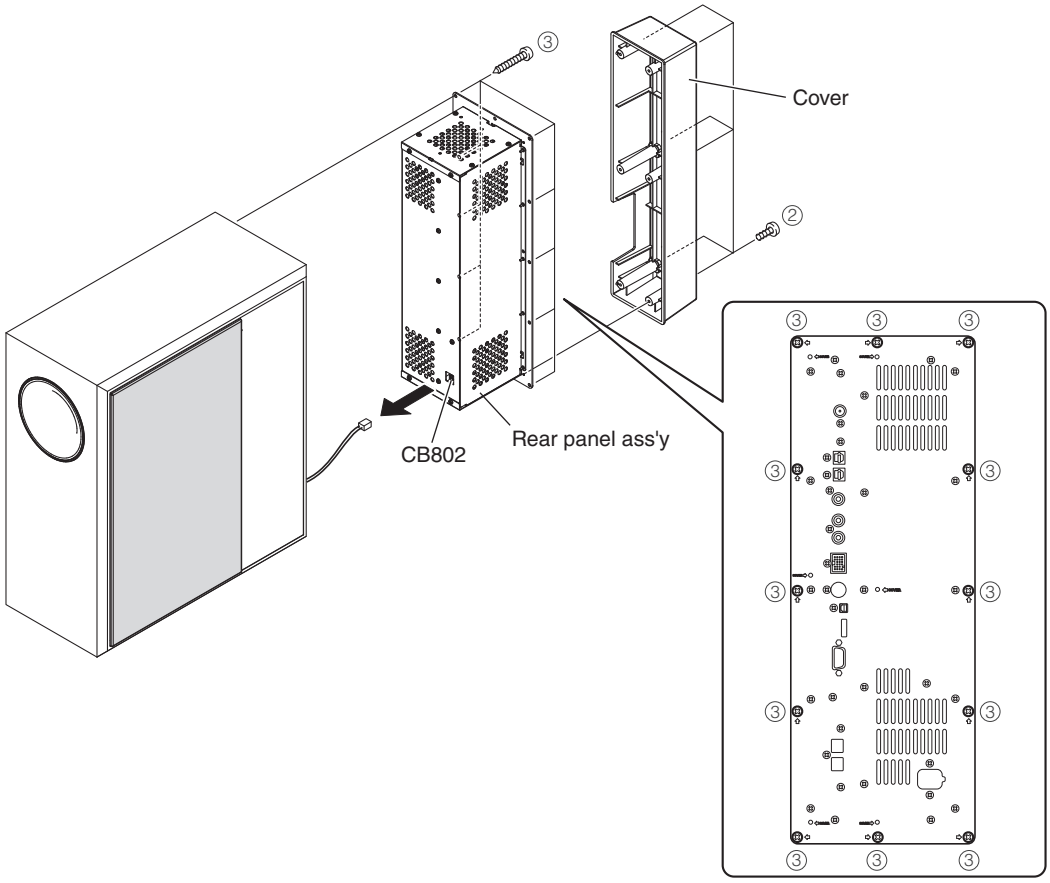


Fig. 3

4. Removal of Rear Panel Ass'y

a. Remove 12 screws (③). (Fig. 3)

* Screws (③) are identified with arrow marks (⇨).

b. Pull out the rear panel ass'y. (Fig. 3)

c. Remove CB802. (Fig. 3)

d. Remove the rear panel ass'y. (Fig. 3)

5. Removal of Chassis Cover Ass'y

a. Remove 14 screws (④) and 6 screws (⑤). (Fig. 4)
b. Remove the chassis cover ass'y. (Fig. 4)

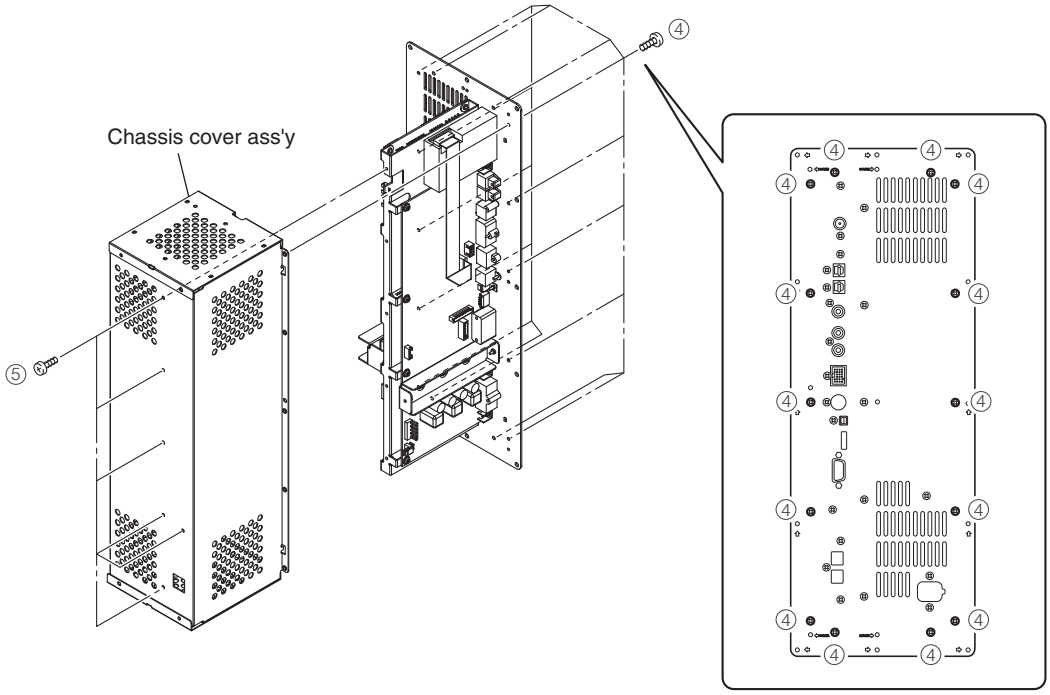


Fig. 4

When checking the P.C.B.s:

- Spread the rubber sheet and the cloth.
  Then place the rear panel ass'y on the cloth and check it. (Fig. 5)
- Reconnect all cables (connectors) that have been disconnected.
- When connecting the flexible flat cable, be careful with polarity.

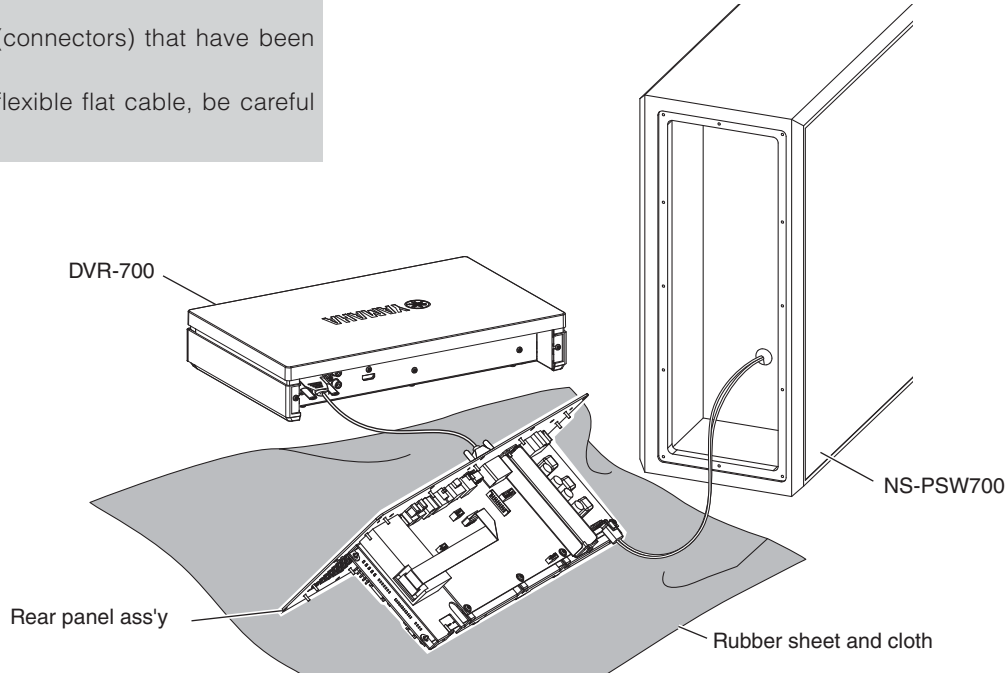


Fig. 5

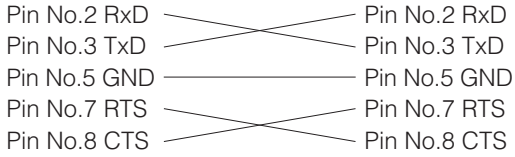
■ UPDATING FIRMWARE

When replacing the following parts, be sure to write the latest firmware.

Replaced parts		Write the latest firmware to			
		Main Microprocessor	DSP	Sub-Microprocessor	Module Board
MAIN P.C.B.	(NS-PSW700)	yes	yes		
IC500 (Main microprocessor) of MAIN P.C.B.	(NS-PSW700)	yes			
IC303 (DSP (TI) flash ROM) of MAIN P.C.B.	(NS-PSW700)		yes		
FRONT P.C.B.	(DVR-700)			yes	
IC303 (Sub-microprocessor) of FRONT P.C.B.	(DVR-700)			yes	
DVD module P.C.B.	(DVR-700)				yes

● Required tools

- Windows 98/2000/Me/XP, PC with a serial port (RS232C)
- Firmware downloader program
  DSP_FLASHER_v3.0.exe : for main microprocessor
  DSP_FLASHER_v2.7.exe : for DSP (TI FLASH ROM)
  FlashSta.exe : for sub-microprocessor
- Firmware
  D700_xxxxx.mot : for main microprocessor
  DVX700_data1_verx_xx.hex: for DSP (TI FLASH ROM)
  D700S_xxxx.mot : for sub-microprocessor
  S8CAxxxx.BIN : for module board
- RS232C cross cable “D-sub 9 pin female”
  (Specifications)



- RS232C conversion adaptor (Part No.: WR492800)

● Preparation

1. For writing to the main microprocessor, DSP and sub-microprocessor:
   Download firmware upgrading program and firmware from the specified source to the same folder of the PC.
2. For writing to the module board:
   Make the Firmware CD by writing the firmware of module board into the root folder of the CD-R.
   Set the CD volume label to “PIONEER”.

● Precautions

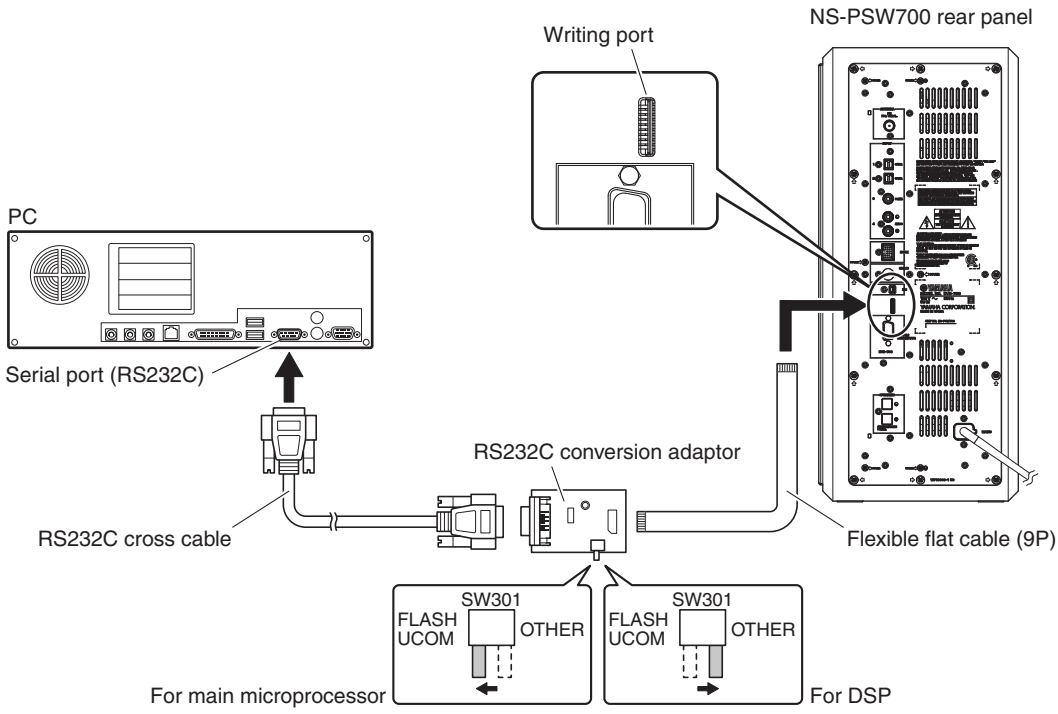
- While writing firmware, keep the other application software on the PC closed.
  It is also recommended to keep the software on the task tray closed as well.
- Do not turn off the power while writing firmware.

● Confirmation of firmware version and checksum

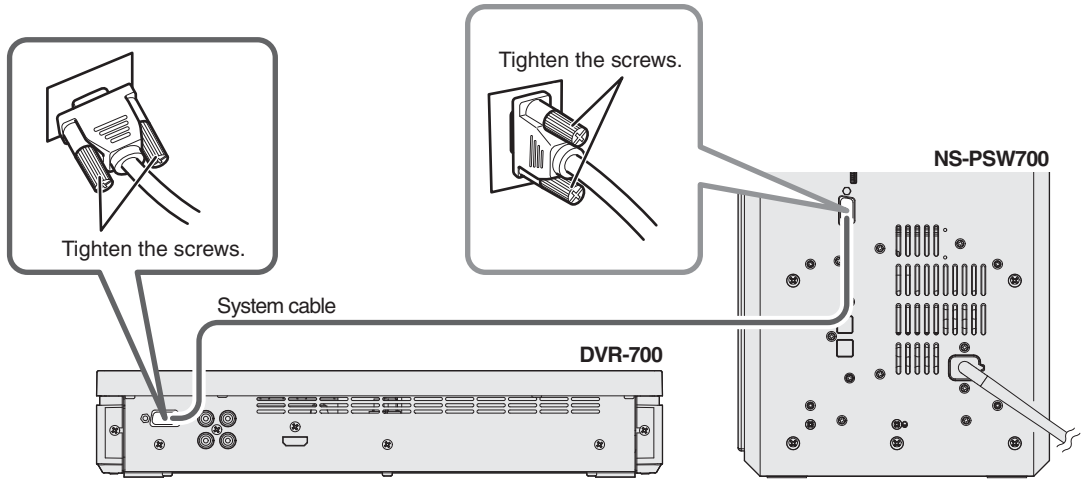
Before and after writing firmware, check the firmware version and checksum by using the self-diagnostic function menu.

1. Start up the self-diagnostic function and select “11. CPU INFORMATION” menu.
2. Have the firmware version and checksum displayed by using sub-menu.
   For more information, refer to “SELF-DIAGNOSTIC FUNCTION”.

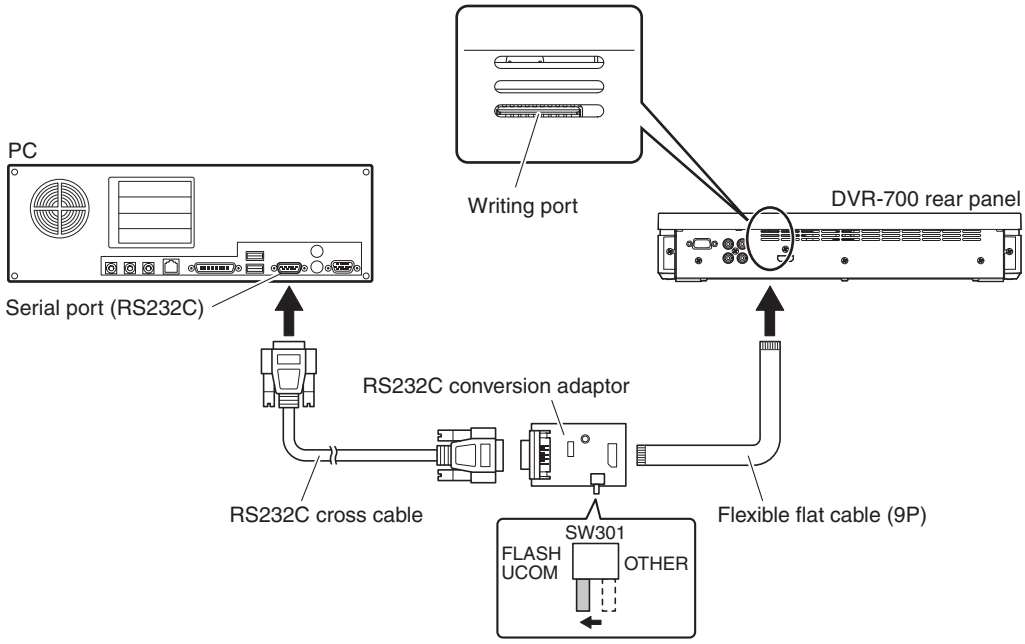
● Connection Diagrams



Connection Diagram 1



Connection Diagram 2



Connection Diagram 3

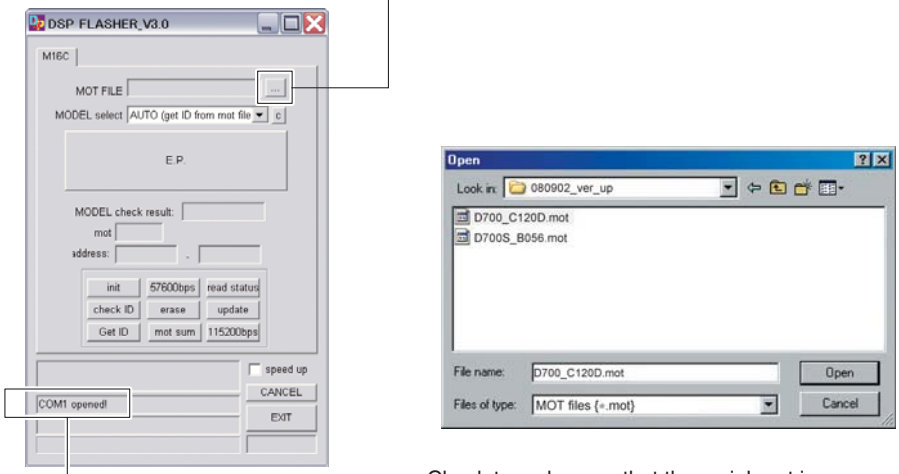
Writing to the Main Microprocessor

Connection

1. Connect the writing port of NS-PSW700 to the serial port (RS232C) of the PC with RS232C cross cable, RS232C conversion adaptor and flexible flat cable. (See connection diagram 1)
2. Set the switch (SW301) of RS232C conversion adaptor to the “FLASH UCOM” side. (See connection diagram 1)

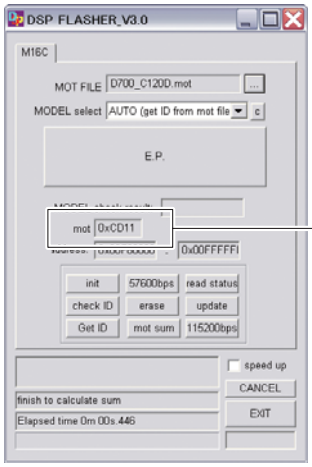
Operation procedures

1. Start up “DSP_FLASHER_v3.0.exe”.
   “DSP FLASHER_V3.0” is displayed. (Fig. 1)
2. Select the firmware.
   Click [...]. (Fig. 1)
   Select “D700_xxxxx.mot”. (Fig. 1)



Check to make sure that the serial port is open.
If “COM x opened!” is not displayed, it is possible that 232C port of the PC has a problem.

When the mot file is loaded



The checksum of the ROM code is displayed in the frame of “mot sum:” (to be used for confirmation after writing)

Fig. 1

3. Connect the power cable of the NS-PSW700 to the AC outlet.

4. Click [E.P.] to start writing. (Fig. 2)
5. When writing is completed, “Program Finished!” is displayed. (Fig. 2)
   Click [OK]. (Fig. 3)
6. Click [EXIT] to end “DSP FLASHER_v3.0.exe”. (Fig. 2)

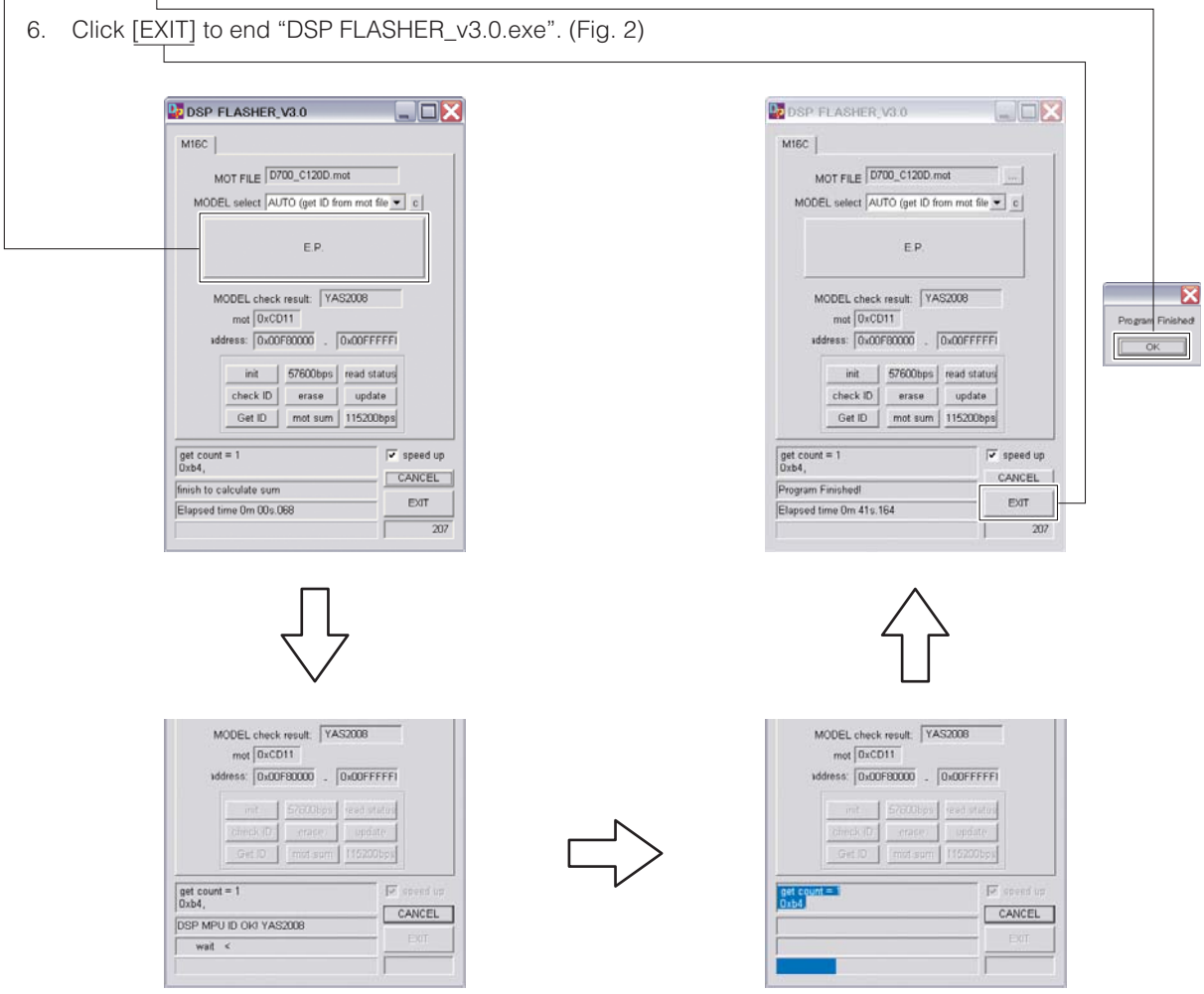


Fig. 2

7. Disconnect the power cable of the NS-PSW700 from the AC outlet.

Writing to DSP

Connection

1. Connect the writing port of the NS-PSW700 to the serial port (RS232C) of the PC with RS232C cross cable, RS232C conversion adaptor and flexible flat cable. (See connection diagram 1)
2. Set the switch (SW301) of RS232C conversion adaptor to the “OTHER” side. (See connection diagram 1)
3. Connect the DVR-700 and the NS-PSW700 with the system cable (D-sub 15pin cable) supplied with this unit. (See connection diagram 2)

Operation procedures

1. Start up “DSP_FLASHER Ver2.7.exe”.
   “DSP FLASHER_V2.70” is displayed. (Fig. 1)
2. Click [Vx61 DSP]. (Fig. 1)

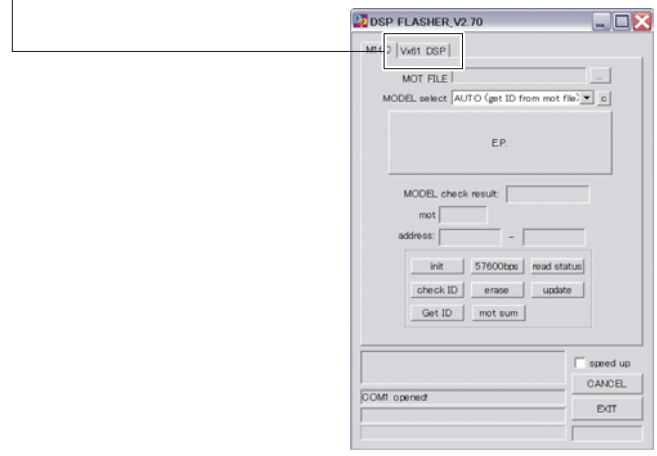


Fig. 1

3. Select the firmware.
   Click [...]. (Fig. 2)

   Select “DVX700_data1_verx_xx.hex”. (Fig. 2)

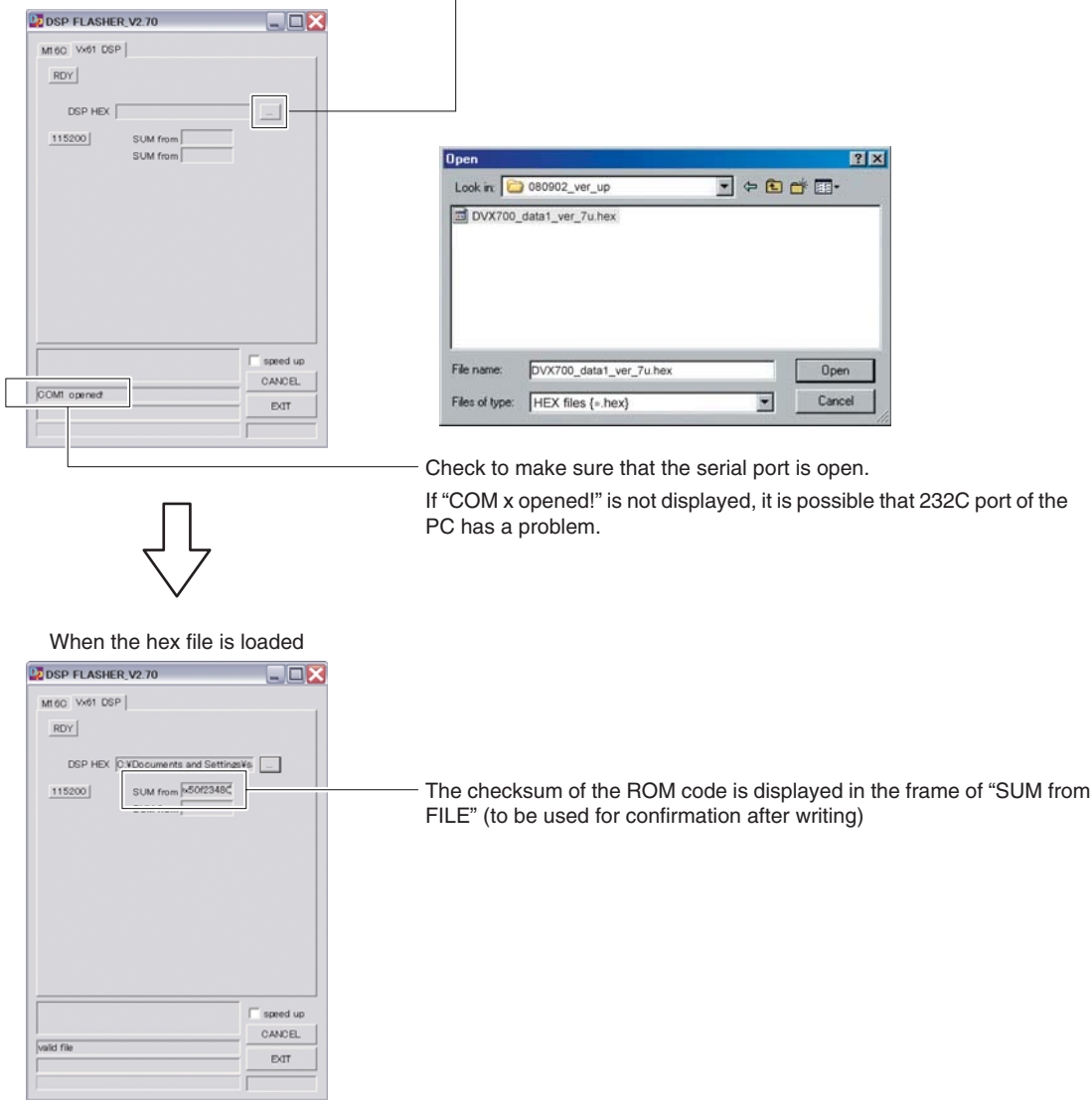


Fig. 2

4. Connect the power cable of the NS-PSW700 to the AC outlet.
5. Make sure that the DVR-700 is in the standby mode.
6. Start up the self-diagnostic function mode by pressing the “TEST” key, “ON SCREEN” key and “STANDBY/ON” key on the remote control in order.
7. Select the “15-1 DSP STBY” menu by pressing the “ ▲ (up) ” (Forward) key and “ ▼ (down) ” (Reverse) key on the remote control.

8. Click [RDY]. (Fig. 3)

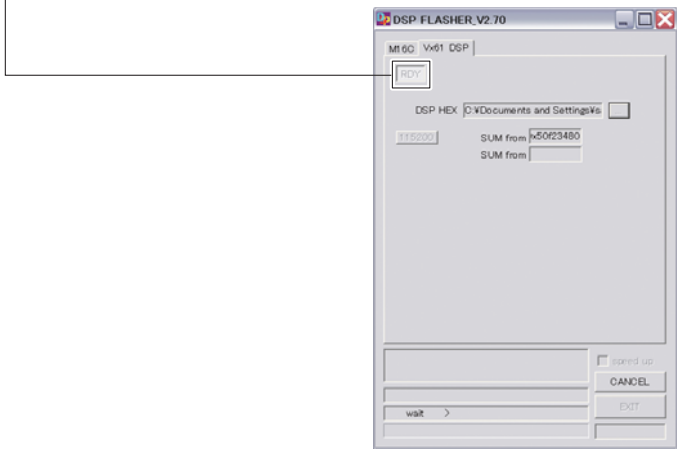


Fig. 3

9. Select the writing mode from "15-1 DSP STBY" by pressing the " ▶ (right) " (Forward) key. Writing starts automatically. (Fig. 4)

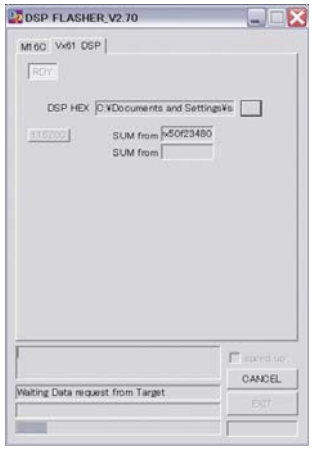


Fig. 4

10. When writing is completed, “Vx61 DSP Flash finished!” is displayed. (Fig. 5)
    The power of this unit turns off/on automatically.
11. Click [EXIT] to end “DSP_FLASHER Ver2.7.exe”. (Fig. 5)

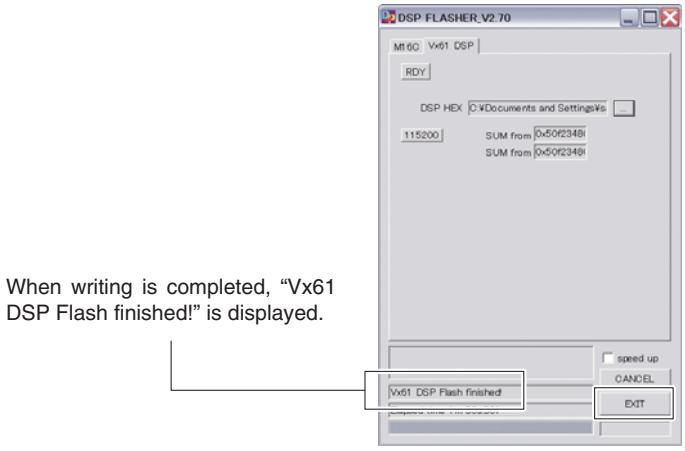


Fig. 5

12. Press the “STANDBY/ON” key of this unit to turn off the power.

Writing to Sub-Microprocessor

Connection

1. Connect the writing port of the DVR-700 to the serial port (RS232C) of the PC with RS232C cross cable, RS232C conversion adaptor and flexible flat cable. (See connection diagram 3)
2. Set the switch (SW301) of RS232C conversion adaptor to the “FLASH UCOM” side. (See connection diagram 3)
3. Connect the DVR-700 and NS-PSW700 with the system cable (D-sub 15pin cable) supplied with this unit. (See connection diagram 2)

Operation procedures

1. Connect the power cable of the NS-PSW700 to the AC outlet.
2. Start up FlashSta.exe, then the screen will appear as shown below. (Fig. 1)
3. Select the port and data to be transmitted. (Fig. 1)
   - **Select Program**
     Select Internal flash memory
   - **RS232C**
     Select the port of RS-232C

   * For selection of the port, COM1 to 4 can be used.
   As COM5 or higher port cannot be used, select out of COM 1 to 4 of the setting on the PC side.
4. Click [OK]. (Fig. 1)

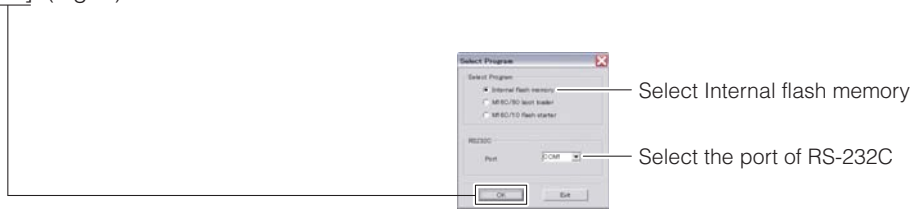


Fig. 1

5. The screen will appear as shown below. (Fig. 2)
6. Select “115200” for Baud rate (bps) and “40” for Program_intervals (ms). (Fig. 2)
7. Click [OK]. (Fig. 2)

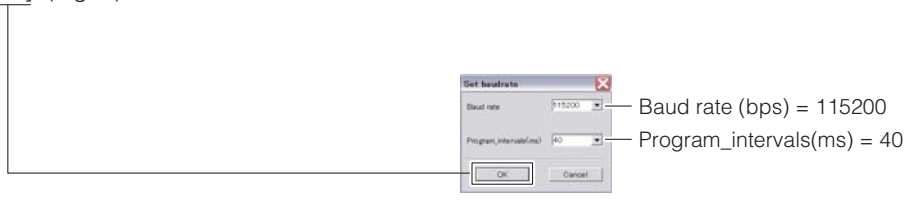


Fig. 2

8. “ID Check” is displayed. (Fig. 3)
   Click [Refer...], and select “D700S_xxxx.mot”. (Fig. 3)

   The ID code and MCU type are loaded when the file is selected. (Fig. 3)

9. Click [OK]. (Fig. 3)

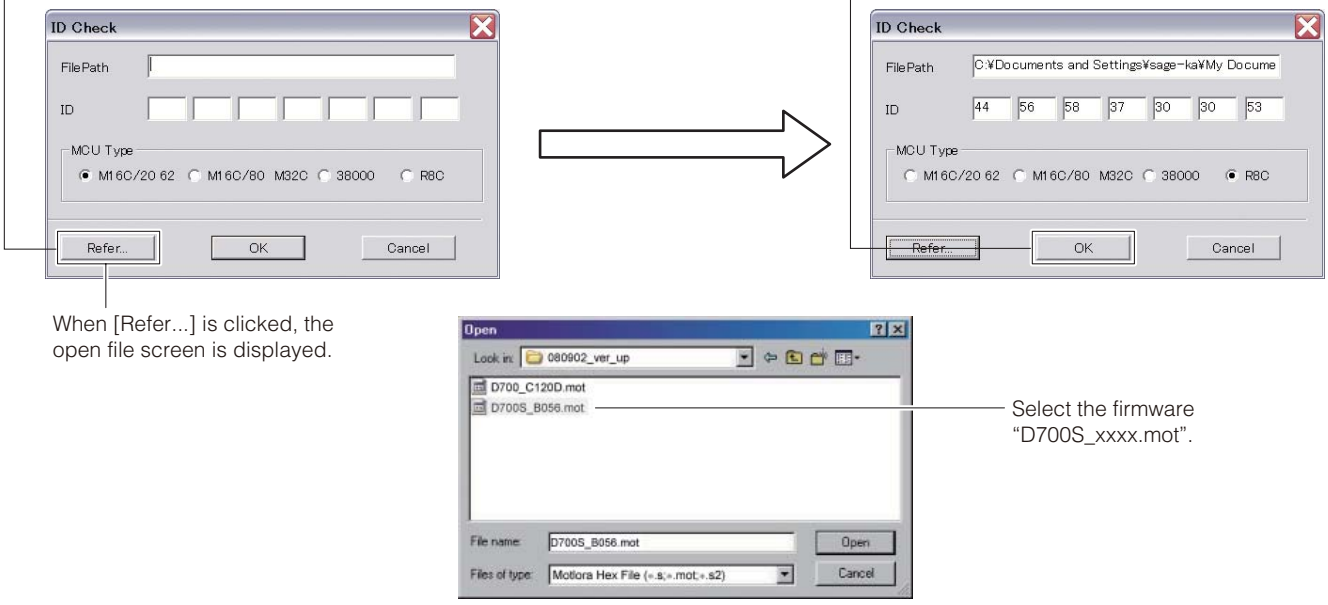


Fig. 3

10. “M16C Flash Start” is displayed. (Fig. 4)
    Click [E.P.R...], then “Erase OK?” is displayed. (Fig. 4)
    Click [OK], then writing is started. (Fig. 4)
11. When writing is completed, “Program OK.” is displayed. (Fig. 4)
    Click [OK]. (Fig. 4)
12. Click [EXIT] to end “FlashSta.exe”. (Fig. 4)

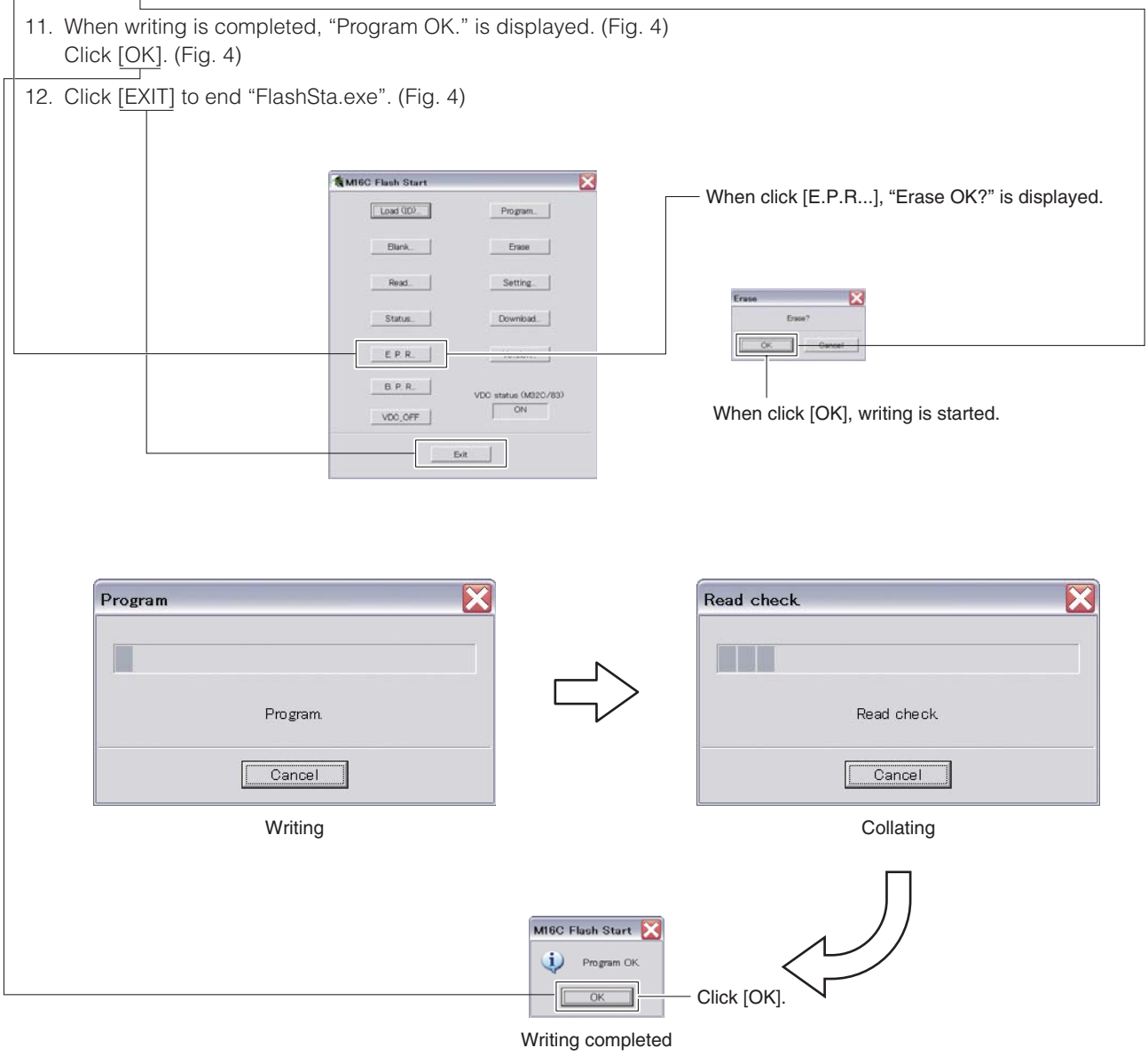


Fig. 4

13. Disconnect the power cable of the NS-PSW700 from the AC outlet.

Writing to the Module Board

Connection

1. Connect the DVR-700 and NS-PSW700 with the system cable (D-sub 15pin cable) supplied with this unit. (See connection diagram 3)
2. Connect the VIDEO OUT terminal of the DVR-700 to the VIDEO IN terminal of the TV monitor with a video pin cable.

Operation procedures

1. Connect the power cable of the NS-PSW700 to the AC outlet.
2. Press the “STANDBY/ON” key of the DVR-700 to turn on the power.
3. Insert the firmware CD to the disc slot.
4. “Upgrade?” is displayed on the TV monitor screen. (Fig. 1)
5. Press the “PLAY” key of the DVR-700, then writing of the firmware is started. (Fig. 1)

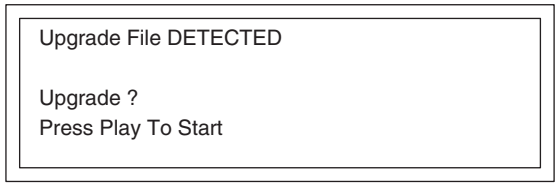


Fig. 1

6. After a few minutes, the firmware CD is drained from a slot automatically. Remove the firmware CD.
   * At this time, do not turn off the power as writing of the firmware is going on in this unit.
   * Writing takes about 1 minute.
7. When writing is completed, the display on the TV monitor screen disappears.
8. Press the “STANDBY/ON” key of this unit to turn off the power.

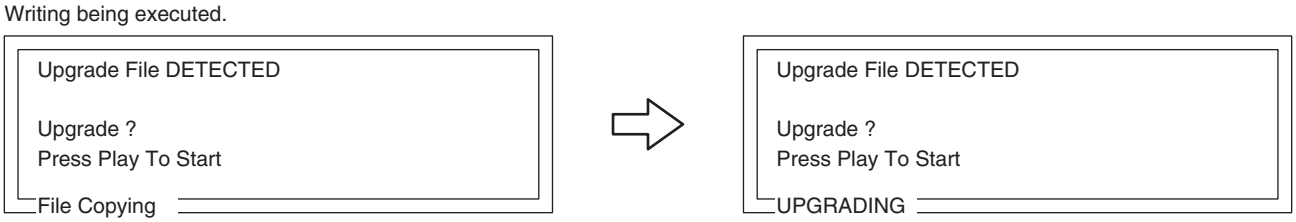


Fig. 2

Confirmation of Firmware Version

1. Press the “STANDBY/ON” key of this unit to turn on the power.
2. Press the “DVD/USB” key on the remote control to select the input DVD/USB.
3. Press the “SETUP” key on the remote control.
   The SETUP menu is displayed on the TV monitor screen. (Fig. 3)
4. Move the cursor to [Initial Settings] by pressing the “DOWN” key on the remote control and press the “ENTER” key. (Fig. 3)

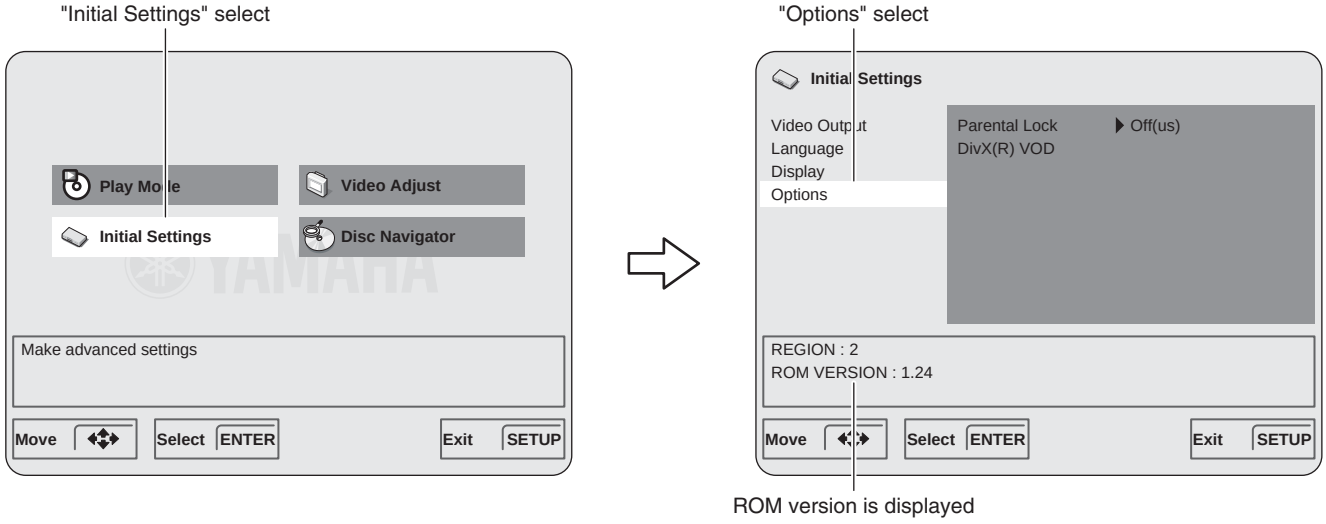


Fig. 3

5. Move the cursor to [Options] by pressing the “DOWN” key on the remote control and press the “ON SCREEN” key. The ROM version is displayed. (Fig. 3)
   * When the displayed firmware version is different from written one, perform the “Writing to the Module Board” procedure all over again.
6. Press the “SETUP” key on the remote control to end the SETUP menu.
7. Press the “STANDBY/ON” key of the DVR-700 to turn off the power.

■ SELF-DIAGNOSTIC FUNCTION

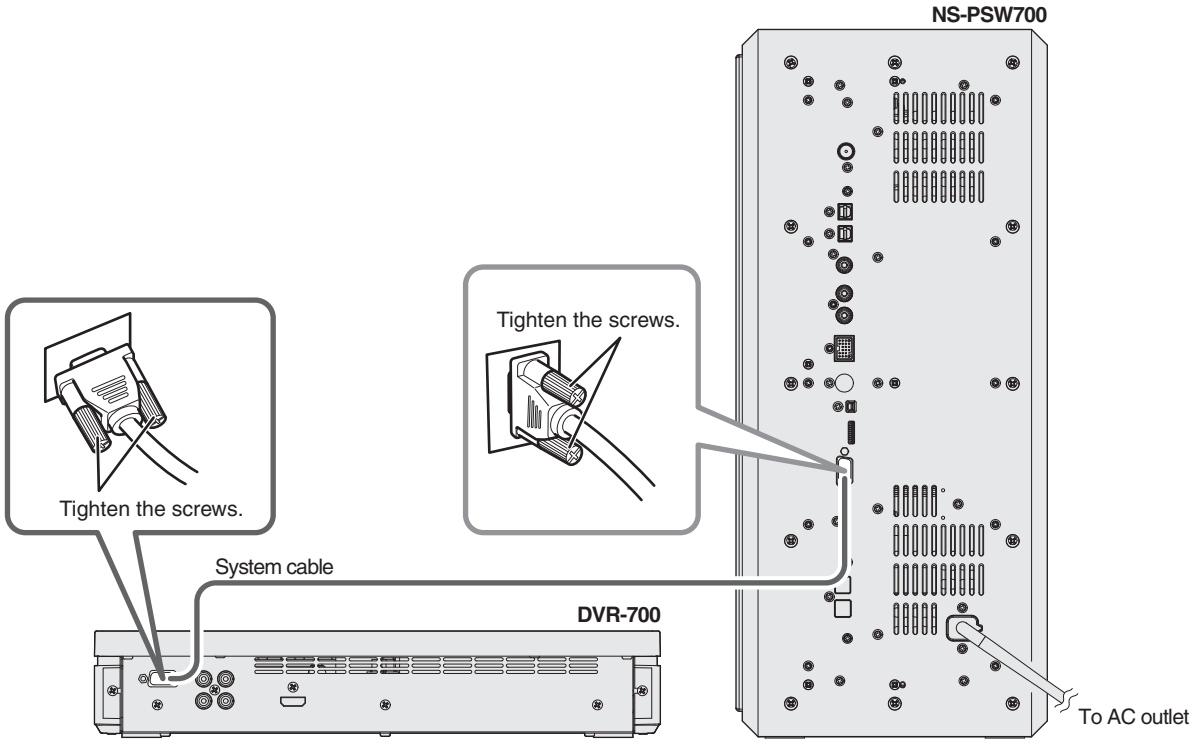
This unit has self-diagnostic functions that are intended for inspection, measurement and location of faulty point.
There are 22 main menu items, each of which has sub-menu items.
Listed in the table below are menu items and submenu items.
Note that not all menu items listed will apply to the models covered in this service manual.

No.	Main menu	Sub-menu	
1	DSP THROUGH	1 MASTER Vol. 1	
		2 MASTER Vol. 30	
		3 MASTER Vol. 60	
		4 MASTER Vol. 100	
2	MUTE CHECK	1 MASTER Vol. 60	
		2 AMP MUTE	
3	VFD CHECK	1 ALL ON	
		2 ALL OFF	
		3 DIMMER	
		4 PATTERN	
4	TEST TONE	1 ALL OUTPUT	
		2 TURN CHANGEOVER	
		3 LFE OUTPUT	
5	DTS TEST TONE	1 L:NML/R: NML	(Not applied to this model)
		2 L: LF/R: RF	(Not applied to this model)
		3 L: LS/R: RS	(Not applied to this model)
		4 L: CTR/R: NONE	(Not applied to this model)
		5 L: LF/R: LS	(Not applied to this model)
		6 L: RF/ R: RS	(Not applied to this model)
6	SPEAKER SELECT	1 SP LARGE	(Not applied to this model)
		2 SP SMALL	(Not applied to this model)
7	AD CHECK	1 DC_PRT/PRV_5SUB	
		2 PRV_30/PRV_CU	
		3 PRV_12/PRV_7i	
		4 PRV_5/PRV_5i	
		5 PRV_3.3/PRV_1.2	
		6 KEY0 / KEY1	
		7 DOCK	
		8 P1s / P2s	
		9 DVD / TE1 (Not applied to this model)	
8	DEVICE CHECK	1 DEVICE CHECK	
9	RDS CHECK (G, F models)	1 RDS CHECK	
10	SET DESTINATION	1 SELECT DEST	
		2 SET DEST	
11	CPU INFORMATION	1 CPU VERSION	
		2 CPU SUM CHECK	
		3 TI VERSION	
		4 TI SUM CHECK	
		5 SUB Version	
		6 SUB SUM Version	
		7 XM Version	
		8 SIRIUS Version	
		9 DESTINATION	
12	EMC TEST	1 EMC TEST	
13	AUTO SLEEP	1 ASLP ON	
		2 ASLP OFF	
14	ERROR INFORMATION	1 ERROR HISTORY 1	
		2 ERROR HISTORY 2	
		3 ERROR HISTORY 3	
		4 ERROR HISTORY 4	
		5 RESET HISTORY	
15	UPDATE DSP	1 DSP STANDBY	
16	DOCK CHECK	1 DOCK CHECK	

No.	Main menu	Sub-menu	
17	SWFR CROSS OVER	1	CRSOVR 40Hz
		2	CRSOVR 60Hz
		3	CRSOVR 80Hz
		4	CRSOVR 90Hz
		5	CRSOVR 100Hz
		6	CRSOVR 110Hz
		7	CRSOVR 120Hz
		8	CRSOVR 160Hz
		9	CRSOVR 200Hz
18	FACTORY PRESET	1	INHIBIT
		2	RESERVED
19	SWEEP TEST	1	SWEEP TEST (Not applied to this model)
20	XM TEST	1	1k - 1dB/44
		2	1k -61dB/44
		3	Mute /44
		4	XM Tone/44
		5	ISO Tone/44
		6	1k - 1dB/32
		7	1k -61dB/32
		8	Mute /32
		9	XM Tone/32
		10	ISO Tone/32
		11	Bus Power OFF
21	SIRIUS TEST	1	SIRIUS CHECK
		2	SIRIUS Information
		3	SIRIUS Version SSP
		4	SIRIUS Version MAC
		5	SIRIUS Version ADP
		6	SIRIUS Version prd_id
		7	SIRIUS Version seg_id
22	DVD SETTING	1	Setting
		2	DVD ID WRITE
		3	DVD ID CLEAR
		4	Rewrite F/W

● Connection

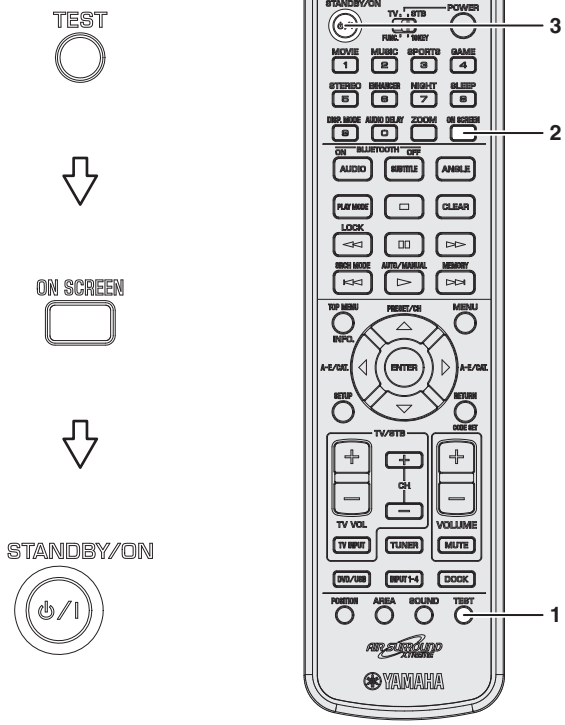
1. Connect the DVR-700 and NS-PSW700 with the system cable (D-sub 15pin cable) supplied with this unit as shown in the figure below.
2. Connect the power cable of the NS-PSW700 to AC outlet.



● Starting Self-Diagnostic Function

With this unit in the standby mode, press the keys on the remote control in the order as shown below.

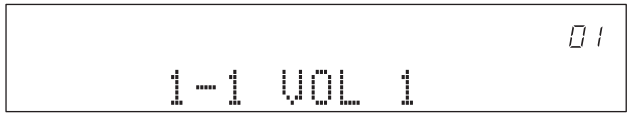
The self-diagnostic function mode is activated and an opening message (the protection history) appears for a few seconds followed by the main menu display (1-1 VOL 1).



Opening message

After a few seconds

Main menu display

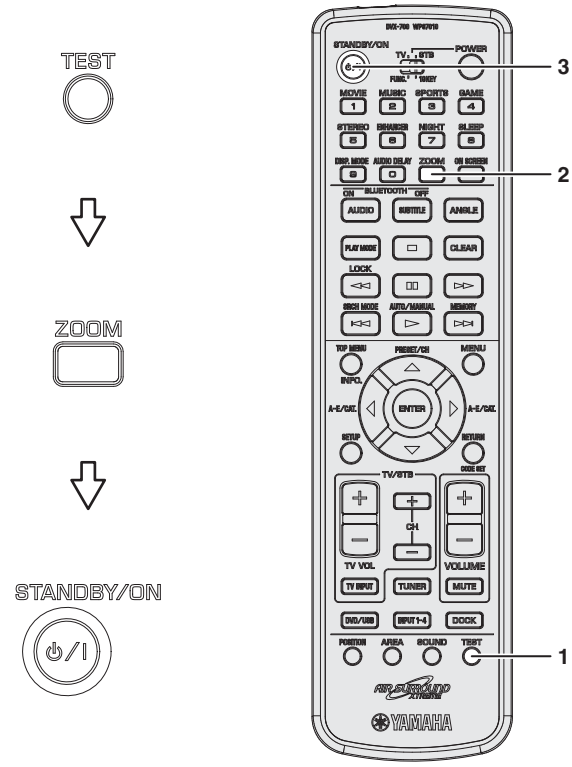


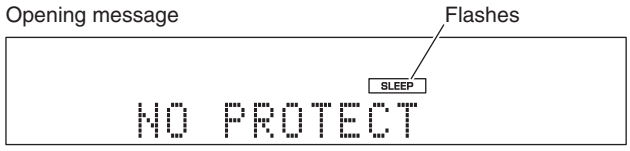
● Starting Self-Diagnostic Function in the protection cancel mode

If the protection function works and causes hindrance to trouble diagnostic, cancel the protection function as described below, and it will be possible to enter the self-diagnostic function mode. (The protection functions other than the excess current detect function will be disabled.)

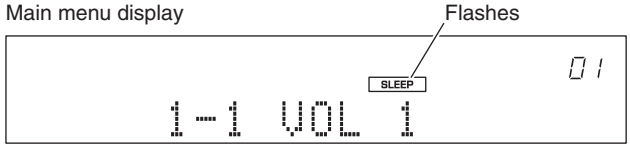
With this unit in the standby mode, press the keys on the remote control in the order as shown below.
The self-diagnostic function mode is activated and an opening message (the protection history) appears for a few seconds followed by the main menu display (1-1 VOL 1).

In this mode, the [SLEEP] segment of the FL display of this unit flashes to indicate that the mode is self-diagnostic function mode with the protection functions disabled.





After a few seconds



CAUTION!
Using this product with the protection function disabled may cause further damage to this unit. Use special care for this point when using this mode.

● Canceling Self-Diagnostic Function

1. Before canceling self-diagnostic function, execute setting for FACTORY PRESET of main menu No. 18 (Memory initialization inhibited or Memory initialized).

   *** In order to keep the user memory stored, be sure to select INIT INHI (Memory initialization inhibited).**

2. Press the “STANDBY/ON” key of this unit to turn off the power.

● Operation procedure of Main menu and Sub-menu

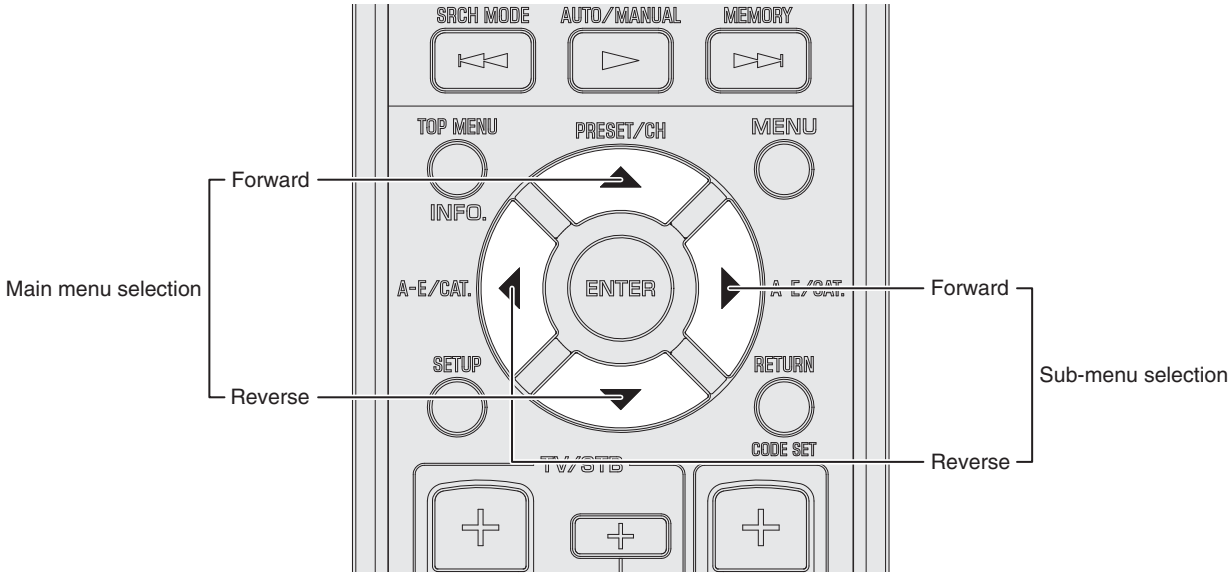
There are 22 menu items, each having sub-menu items.

Main menu selection

Select the main menu using “ ▲ (up) ” (Forward) key and “ ▼ (down) ” (Reverse) key on the remote control.

Sub-menu selection

Select the sub-menu using “ ▶ (right) ” (Forward) key and “ ◀ (left) ” (Reverse) key on the remote control.



● Functions in Self-Diagnostic Function mode

In addition to the self-diagnostic function menu items, functions as listed below are available.

- [DVD/USB] : Signal input DVD/USB is selected.
- [INPUT1] : Signal input OPTICAL1 is selected.
- [INPUT2] : Signal input OPTICAL2 is selected.
- [INPUT3] : Signal input COAXIAL is selected.
- [INPUT4] : Signal input ANALOG is selected.
- [TUNER] : Signal input FM tuner is selected.
- [DOCK] : Signal input DOCK is selected.
- [STANDBY/ON] : The self-diagnostic function mode is canceled and the stand-by mode starts.

● Details of Self-Diagnostic Function menu

1. DSP THROUGH

The output level can be selected by using sub-menu.
The signal is output in digital full-bit without including the head margin. (L/R: 0dBm, SW: 0dBm)
The multi-channel source, center and surround L/R channels are not output.
The 2ch stereo source, L channel signal with L.P.F. is assigned to sub-woofer channel.
Select the input using the INPUT key (INPUT4 for default).

1-1 VOL 1

MASTER Vol. = 1 (-90dB, MIN. VOLUME)

1-2 VOL 30

MASTER Vol. = 30 (-40dB)

1-3 VOL 60

MASTER Vol. = 60 (-20dB)

1-4 VOL 100

MASTER Vol. = 100 (0dB, MAX. VOLUME)

2. MUTE CHECK

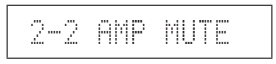
The output level can be selected by using sub-menu.
The signal is output in digital full-bit without including the head margin. (L/R: 0dBm, SW: 0dBm)
The multi-channel source, center and surround L/R channels are not output.
The 2ch stereo source, L channel signal with L.P.F. is assigned to sub-woofer channel.
Select the input using the INPUT key (INPUT4 for default).

2-1 VOL 60

MASTER Vol. = 60 (-20dB), MUTE OFF

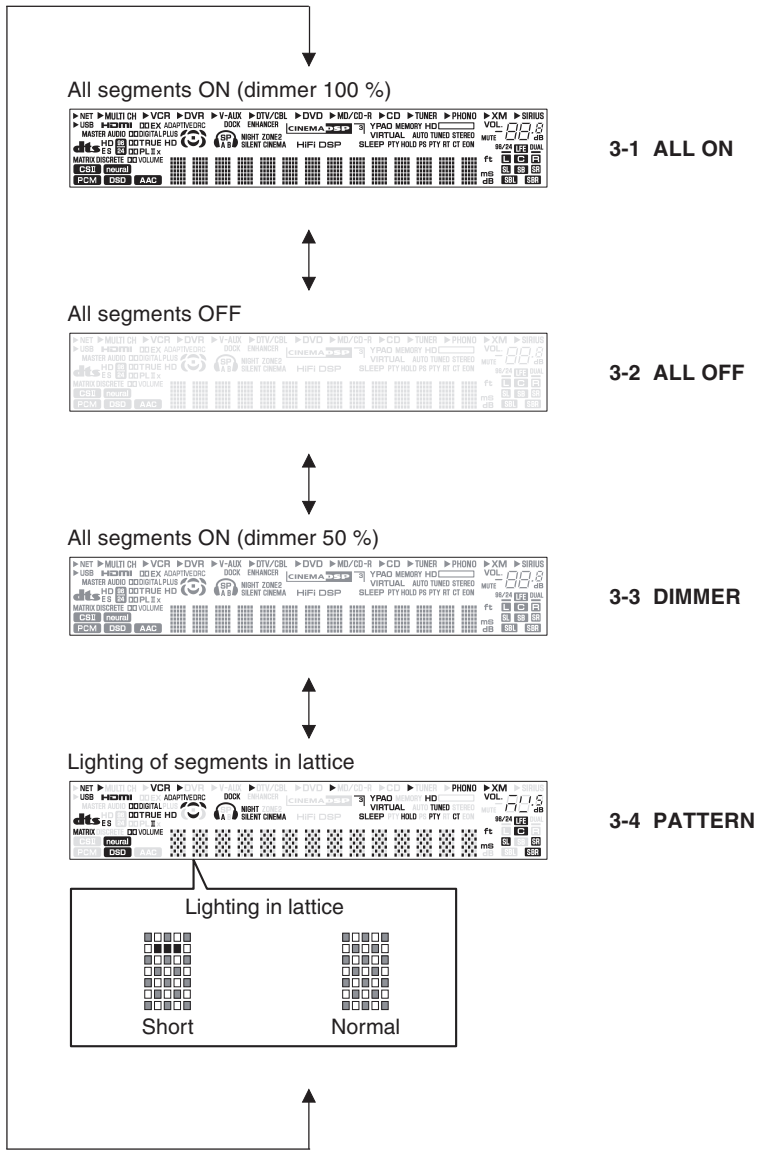
2-2 AMP MUTE

Digital Amp MUTE.
The MUTE terminal of PWM processor "TAS5086"is controlled through the microprocessor.



3. VFD CHECK

This menu is used to check the FL and FL driver.
Using the sub-menu, the display varies as shown below.



Segment conditions of the FL driver and the FL tube are checked by turning ON and OFF all segments.

Next, the operation of the FL driver is checked by using the dimmer control. Then a short between segments next to each other is checked by turning ON and OFF all segments alternately (in lattice). (In the above example, the segments in the second row from the top are shorted.)

4. TEST TONE

The built-in noise generator outputs the test tone through the channels specified by the sub-menu.
The noise frequency for LFE (SUBWOOFER) is 35 to 80 Hz. Other than that, the noise frequency is 500 to 2 kHz.

4-1 All OUT

A test tone is output from all the speakers.

4-1 ALL OUT

4-2 TURN CHANGEOVER

Every time the “MUSIC” key on the remote control is pressed, a test tone is output from each channel in the following order.

4-2 TEST ALL

Test tone is output from all channels.

4-2 TEST FL

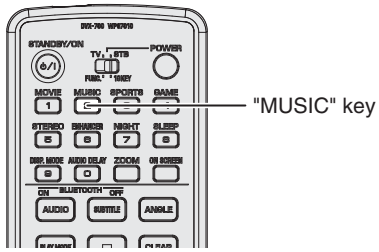
Test tone is output from the FRONT L channel.

4-2 TEST LFE

Test tone is output from the SUBWOOFER channel.

4-2 TEST FR

Test tone is output from the FRONT R channel.



4-3 LFE OUT

A test tone is output from the subwoofer.

4-3 LFE OUT

5. DTS TEST

Not applied to this model.

5-1 L: N / R: N

5-2 L: LF / R: RF

5-3 L: LS / R: RS

5-4 L: C / R: --

5-5 L: LF / R: LS

5-6 L: RF / R: RS

6. SPEAKER SELECT

Not applied to this model.

6-1 SP SMALL

6-2 SP LARGE

7. AD CHECK

This menu is used to display the A/D conversion value of the microprocessor which detects panel keys of this unit and protection functions by using the sub-menu.

7-1 DC: / 5S:

DC: DC voltage of speaker output

Normal value: 82 to 173
(Reference voltage: 5.0 V=255)

Detection for AD port: DC_PRT
(126 pin of main microprocessor IC500 of MAIN P.C.B.)

5S: Power supply voltage +5SUB (for microprocessor)

Normal value: 179 to 255
(Reference voltage: 5.0 V=255)

Detection for AD port: PRV_5SUB
(120 pin of main microprocessor IC500 of MAIN P.C.B.)

7-2 30: / CU:

30: Power supply voltage +30D (for digital amplifier)

Normal value: 103 to 178
(Reference voltage: 5.0 V=255)

Detection for AD port: PRV_30
(123 pin of main microprocessor IC500 of MAIN P.C.B.)

CU: Power supply voltages +15D and -29VP (for DVR-700)

Normal value: 48 to 222
(Reference voltage: 5.0 V=255)

Detection for AD port: PRV_CU
(124 pin of main microprocessor IC500 of MAIN P.C.B.)

7-3 12: / 7i:

12: Power supply voltages +12D, +12A and +10T (for digital amplifier/analog audio)

Normal value: 106 to 162
(Reference voltage: 5.0 V=255)

Detection for AD port: PRV_12
(125 pin of main microprocessor IC500 of MAIN P.C.B.)

7i: Power supply voltage +7i (for DOCK)

Normal value: 64 to 181
(Reference voltage: 5.0 V=255)

Detection for AD port: PRV_7i
(112 pin of main microprocessor IC500 of MAIN P.C.B.)

```
12:135 7i:142
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7-4 5: / 5i:

5: Power supply voltages +5D and +5.3D (for digital circuit)

Normal value: 104 to 155
(Reference voltage: 5.0 V=255)

Detection for AD port: PRV_5
(134 pin of main microprocessor IC500 of MAIN P.C.B.)

5i: Power supply voltage +5i (for DOCK)

Normal value: 97 to 158
(Reference voltage: 5.0 V=255)

Detection for AD port: PRV_5i
(135 pin of main microprocessor IC500 of MAIN P.C.B.)

```
5:125 5i:013
```

7-5 3: / 1P2:

3: Power supply voltage +3.3D (for digital circuit)
Normal value: 86 to 141
(Reference voltage: 5.0 V=255)
Detection for AD port: PRV_3.3
(136 pin of main microprocessor IC500 of MAIN P.C.B.)

1P2: Power supply voltage +1.2D (for DSP IC)
Normal value: 42 to 81 (Reference voltage: 5.0 V=255)
Detection for AD port: PRV_1.2
(137 pin of main microprocessor IC500 of MAIN P.C.B.)

7-6 KY0: / KY1:

KY0 / KY1:

Panel key of this unit. (without “STANDBY/ON” key)
When the A/D conversion value of the panel key becomes out of the specified range, normal operation will not be available.
In that case, check the constant of voltage dividing resistor, solder condition, etc. with referring to the table below.
(Reference voltage: 5.0 V=255)

Detection for AD port: KEY0 (39 pin of sub-microprocessor IC303 of OPERATION P.C.B.)
KEY1 (41 pin of sub-microprocessor IC303 of OPERATION P.C.B.)

Key Input(A-D) Pull-Up Resistance 10 k-Ohms

Ohm	0	+ 680	+ 680	+ 15k	+ 13.5k
V	0 – 0.2	0.2 – 0.4	0.5 – 1.8	1.9 – 3.4	3.5 – 4.0
A/D value	0 – 8	10 – 20	24 – 94	95 – 175	176 – 206
KEY0 (39 pin)	—	EJECT	PLAY	VOLUME UP	VOLUME DOWN

Ohm	0	+ 1.2k	+ 1.2k	+ 12.7k	+ 5.3k	+ 2.7k
V	0 – 0.1	0.3 – 0.7	0.8 – 1.7	1.8 – 2.7	2.8 – 3.2	3.3 – 3.6
A/D value	0 – 14	15 – 38	39 – 89	90 – 141	142 – 166	167 – 184
KEY1 (41 pin)	—	—	STOP	INPUT	—	PAUSE

7-7 DOC:

DOCK:

DOCK type
(Reference voltage: 5.0 V=255)

DOCK detection for AD port (IC500 Microprocessor pin no. 133)
Pull-up resistance 10 k-ohms

DOCK type	DOCK (Bluetooth)	Reserved	Reserved	DOCK (iPod)	Reserved	(Development)	No connect
Ohm	0.56k	2.7k	5.6k	10.0k	18.0k	39.0k	–
ID DOCK (Pin no. 133)	5-25	50-60	85-100	120-140	150-170	195-210	245-255

7-8 P1s: / P2s:

P1s: Power supply voltage +5D (for digital circuit of DVR-700)

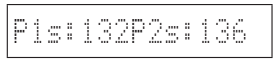
Normal value: 97 to 158
(Reference voltage: 5.0 V=255)

Detection for AD port: VPRT1
(43 pin of sub-microprocessor IC303 of OPERATION P.C.B.)

P2s: Power supply voltages 6R3V, V+5V and 3R3V (for DVD module P.C.B.)

Normal value: 108 to 155 (INPUT select: DVD/USB), 0 (INPUT select: others)
(Reference voltage: 5.0 V=255)

Detection for AD port: VPRT2
(48 pin of sub-microprocessor IC303 of OPERATION P.C.B.)



7-9 DVD: / TE1:

DVD: Voltage detect of DVD module (for DVR-700)

Normal value: 106 to 162 (INPUT select: DVD/USB), 0 (INPUT select: others)
(Reference voltage: 5.0 V=255)

Detection for AD port: VDET
(49 pin of sub-microprocessor IC303 of OPERATION P.C.B.)

TE1 (CU_THM):

Not applied to this model.

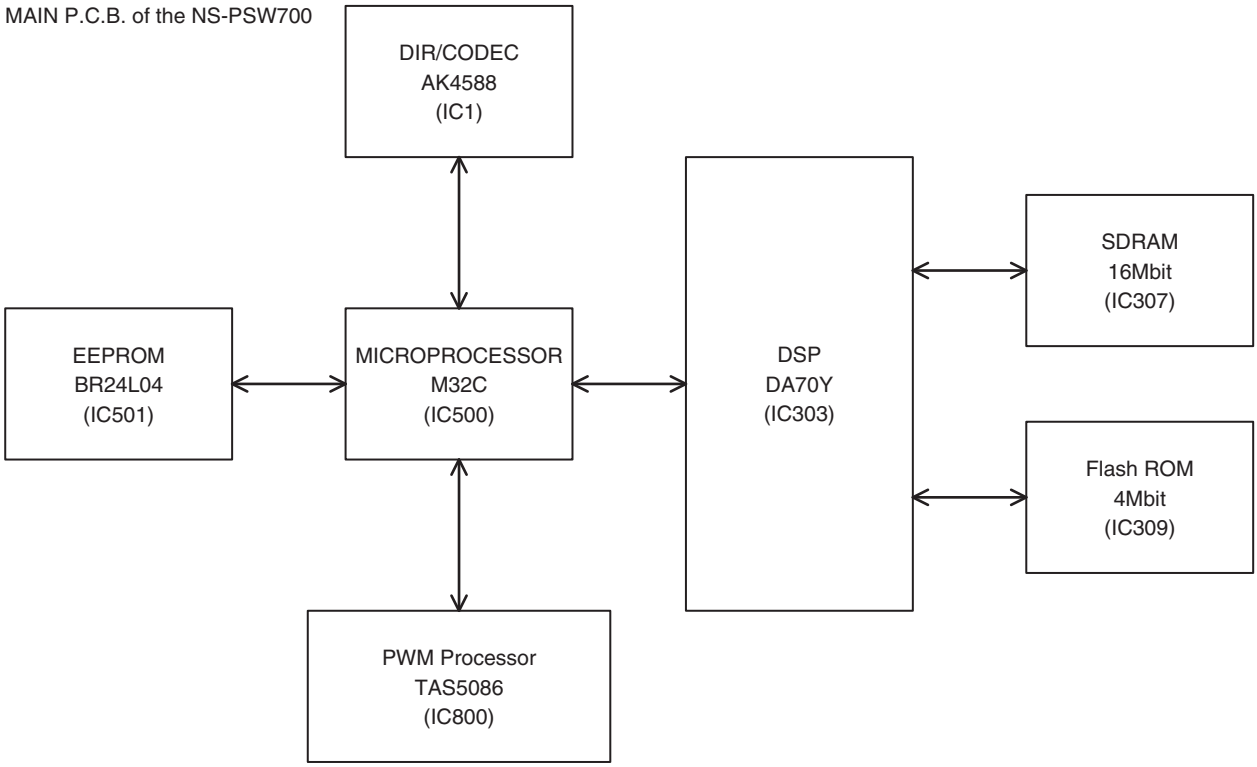
8. DEVICE CHECK

The communication between devices and register access are checked automatically.

When an error is found, corresponding error message is displayed as shown below.

8 NO ERROR	No error detected.
8 ERR DIR	Error detection of DIR/CODEC (IC1).
8 ERR DSP	Error detection of DSP (IC303).
8 ERR SDRAM	Error detection of SDRAM (IC307).
8 ERR FLASH	Error detection of flash ROM (IC309).
8 ERR EEPROM	Error detection of EEPROM (IC501).
8 ERR DAMP	Error detection of PWM processor for digital amp (IC800).

MAIN P.C.B. of the NS-PSW700



9. RDS (G, F models)

This menu is used to check the RDS circuit.

When the RDS data is received, the program type appears on the FL display.

FM input is selected automatically in this menu.

87.5 MHz is set as default frequency.

9 RDS

10. SET DESTINATION

This menu is used to write the destination information in EEPROM.

Caution: After replacing MAIN P.C.B. or EEPROM (IC501 MAIN P.C.B.), be sure to change the destination setting using this main menu. If the destination setting is not changed, "UNKNOWN DEST" is displayed and proper operation is not available.

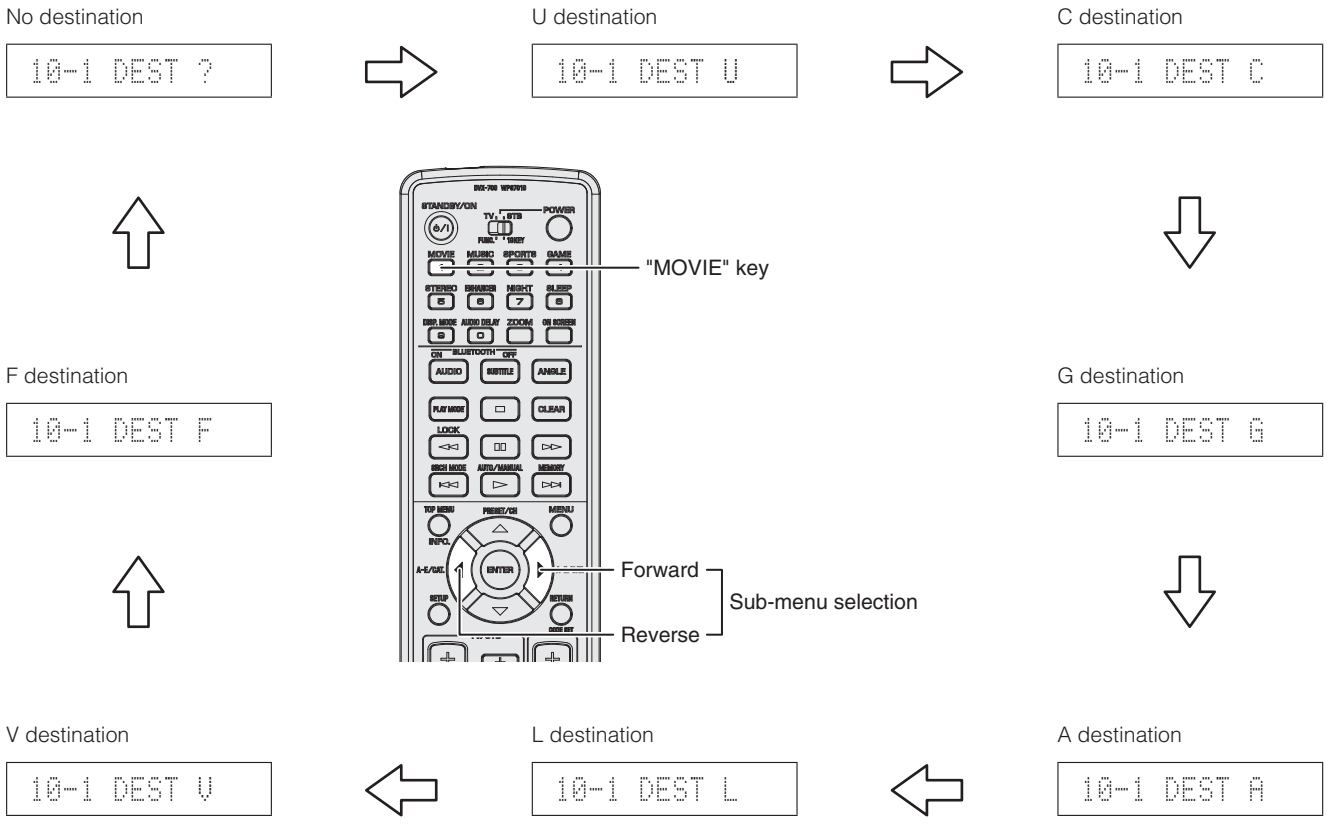
10-1 SELECT DESTINATION

Use the procedure described below to change the destination setting.

Every time the "MOVIE" key on the remote control is pressed, the destination setting item is displayed in the order as shown below.

Have the desired destination setting displayed and select sub-menu "10-2 SET DESTINATION" by pressing the " ▶ (right) " (Forward) key and " ◀ (left) " (Reverse) key on the remote control.

Caution: Selecting the destination setting item alone does not complete the procedure to change it. Be sure to have Sub menu "10-2 SET DESTINATION" displayed.



10-2 SET DESTINATION

This sub-menu is used to write the destination setting, which is selected by using "10-1 SELECT DESTINATION" menu, to the EEPROM (IC501 MAIN P.C.B.).

10-2 U SET!

11. CPU INFORMATION

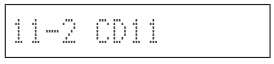
The information on main microprocessor (CPU), DSP, sub-microprocessor (SUB-CPU), XM (U, C models), SIRIUS (U, C models) and destination are displayed.

11-1 CPU version

The firmware version of the microprocessor is displayed.

11-2 CPU Checksum

The firmware checksum of the microprocessor is displayed.



11-3 DSP version

The firmware version of the DSP is displayed.

11-4 DSP Checksum

The firmware checksum of the DSP is displayed.

11-5 SUB-CPU version

The firmware version of the sub-microprocessor is displayed.

11-6 SUB-CPU Checksum

The firmware checksum of the sub-microprocessor is displayed.

11-7 XM version (U, C models)

The firmware version of XM is displayed.

11-8 SIRIUS version (U model)

The firmware version of SIRIUS is displayed.

11-9 DEST

The destination information written in EEPROM is displayed.

DEST ? = Unknown destination
DEST U = U model
DEST C = C model
DEST G = G model
DEST A = A model
DEST L = L model
DEST V = V model
DEST F = F model

12. EMC TEST

The signal is output in digital full-bit without including the head margin.
Select the input using the INPUT key (INPUT1 for default).
Output can be adjusted in the range of master volume control from -90 to 0 dB.

13. AUTO SLEEP

ON/OFF of the auto-sleep function is setup.
These settings are retained until initialization by “18. FACTORY PRESET” is executed.

13-1 ASLP ON

An auto-sleep function is turned ON.

13-2 ASLP OFF

An auto-sleep function is turned OFF.

14. ERROR INFORMATION

The error information is displayed up to latest 4 errors.
When the same error is repeated, it is ignored.
This information is retained until sub-menu 14-5 is selected or EEPROM is initialized.

14-1 to 14-4 ERROR INFORMATION

14-1 NoPRT	NO ERROR
14-1 TmpDaxxxx	Digital Amp TAS5342 (IC801, IC802 MAIN P.C.B.) over-temperature.
14-1 IPRTxxxxx	Digital Amp TAS5342 (IC801, IC802 MAIN P.C.B.) over-current.
14-1 DcPRTxxxx	Speaker output abnormal DC voltage.
14-1 PS_5Sxxxx	Abnormal voltage level. +5SUB (for main microprocessor)
14-1 PS_30xxxx	Abnormal voltage level. +30D (for digital amp)
14-1 PS_15xxxx	Abnormal voltage level. +15D, -29VP (for DVR-700)
14-1 PS_12xxxx	Abnormal voltage level. +12D, +12A, +10T (for digital amp and analog audio)
14-1 PS_7ixxxx	Abnormal voltage level. +7i (input of the power regulator for DOCK)
14-1 PS_5xxxxx	Abnormal voltage level. +5D, +5.3D (for digital circuit)
14-1 PS_5ixxxx	Abnormal voltage level. +5i (for DOCK)
14-1 PS_3xxxxx	Abnormal voltage level. +3.3D (for digital circuit)
14-1 PS_1P2xxx	Abnormal voltage level. +1.2D (for DSP)
14-1 SPS_1xxxx	Abnormal voltage level. +5D (for DVR-700 digital circuit)
14-1 SPS_2xxxx	Abnormal voltage level. 6R3V, V+5V, 3R3V (for DVD module P.C.B.)

14-1 SDVDxxxxx	Abnormal voltage level. VDET (for DVR-700 DVD module)
14-1 STE_1xxxx	Over-temperature of DVR-700. (Not applied to this model.)

14-5 RST HIST !

When you select this menu and press the “ENTER” key on the remote control, then the error information will be initialized.

14-5 RST HIST!

15. UPDATE DSP

This menu is used to write the DSP firmware. (See “Writing to DSP” of “UPDATING FIRMWARE”)

Note: Be sure to use this menu only for “writing to DSP”. Otherwise, all keys will become non-operable.

15-1 DSP STBY

After operating step 8 of “writng to DSP”, press the “ ▶ (right)” (forward) key on the remote control to start writing.

When writing is started, the display is changed as shown below.

Standby mode

60
15-1 DSP STBY

To press “ ▶ (right) ” (forward) key

Writing mode

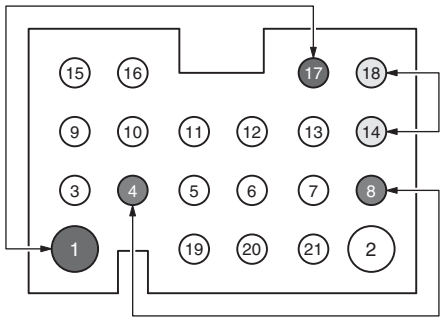
-- “- -” is displayed.
15-1 DSP STBY

If all keys have become non-operable, disconnect the power cable of this unit from the AC outlet.

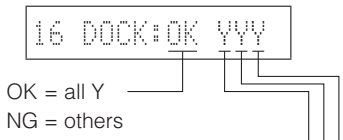
16. DOCK CHECK

This menu is used to check the DOCK connector without the iPod itself.
With the power to this unit turned off, short between pins No.14 (TX) and No. 18 (RX), between pins No. 1 (PWR) and No. 17 (ACCPOW) and between pins No. 4 (iPDET) and No. 8 (DGND).
Start the self-diagnostic function and select this menu.
The check result is displayed according to the following display specifications.

Note) Be sure to return the shorted locations to their original state.



DOCK connector



OK = all Y
NG = others

Check item	Short pins	Result		Display
UART loop back test	Pins No.14 (TX) – No.18 (RX)	OK		Y
		NG		N
iPAP (iPod accessory power) detection	Pins No.1 (PWR+) – No.17 (ACCPWR)	IC500 (MAIN P.C.B.) pin No. 141 state	High	Y
			Low	N
iPDET (iPod installation to DOCK) detection	Pins No.4 (iPDET) – No.8 (DGND)	IC500 (MAIN P.C.B.) pin No. 4 state	Low	Y
			High	N

17. SWFR CROSSOVER

This menu is used to set the crossover frequency of SUBWOOFER/Front L/R channels.
This setting is retained until EEPROM is initialized.
(Setting subwoofer level to 0 in advance.)

17-1 CRSOVR 40Hz

Cross Over Frequency = 40Hz

17-2 CRSOVR 60Hz

Cross Over Frequency = 60Hz

17-3 CRSOVR 80Hz

Cross Over Frequency = 80Hz

17-4 CRSOVR 90Hz

Cross Over Frequency = 90Hz

17-5 CRSOVR 100Hz

Cross Over Frequency = 100Hz

17-6 CRSOVR 110Hz

Cross Over Frequency = 110Hz

17-7 CRSOVR 120Hz

Cross Over Frequency = 120Hz

17-8 CRSOVR 160Hz

Cross Over Frequency = 160Hz

17-9 CRSOVR 200Hz

Cross Over Frequency = 200Hz

18. FACTORY PRESET

This menu is used to reserve and inhibit initialization of EEPROM.

18-1 INIT INHI (Initialization inhibited)

EEPROM initialization is not executed. Select this sub-menu to protect the user setting values.

18-2 INIT RSRV (Initialization reserved)

Initialization of EEPROM is reserved. It is actually executed the next time when the power is turned on.
Select this sub-menu at factory shipment or before initialization of EEPROM. The destination information is retained even after initialization.

CAUTION: Before setting to the INIT RSRV, write down the existing preset memory content of the tuner in a table as shown below.
(This is because setting to the INIT RSRV will cause the user memory content of the tuner to be erased.)

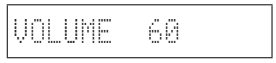
Preset Group	P1	P2	P3	P4	P5	P6	P7	P8
A								
B								
C								
D								
E								

19. SWEEP TEST

For the sweep test of front and subwoofer speakers.
Front L/R and subwoofer output's filter including cross-over frequency and DSP head margin should be same as "stereo" mode in normal operation mode.

20. XM TEST (U, C models)

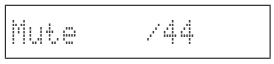
This menu is used to check the output of XM Satellite Radio.
Volume level is changed to 60.



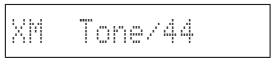
20-1 1k -1dB/44
The test tone (1kHz, -1dB/44.1kHz) is output.

20-2 1k -61dB/44
The test tone (1kHz, -61dB/44.1kHz) is output.

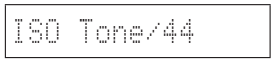
20-3 Mute /44
Nothing is output.



20-4 XM Tone/44
The XM tone (44.1kHz) is output.



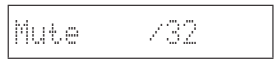
20-5 ISO Tone/44
The ISO tone (44.1kHz) is output.



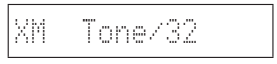
20-6 1k -1dB/32
The test tone (1kHz, -1dB/32kHz) is output.

20-7 1k -61dB/32
The test tone (1kHz, -61dB/32kHz) is output.

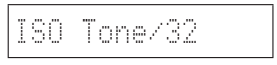
20-8 Mute /32
Nothing is output.



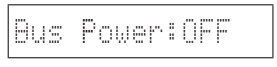
20-9 XM Tone/32
The XM tone (32kHz) is output.



20-10 ISO Tone/32
The ISO tone (32kHz) is output.



20-11 Bus Power OFF
The power of XM module is turned off.



21. SIRIUS TEST (U, C models)

This menu is used to check SIRIUS Satellite Radio function by using Sirius Connect tuner.
Volume level is changed to 60.

```
VOLUME  60
```

21-1 SIRIUS:

The UART loop-back is checked.

```
SIRIUS: --
```

OK : Normal
NG : Abnormal
– – : Unconnected

21-2 SR:

The SIRIUS antenna information is displayed.

```
SR:FF 00 FF
```

Result of antenna diagnostic mode (status)
Antenna error history (SSP error codes)
Antenna generation (gen_id)

21-3 SSP:

The SSP version of SIRIUS is displayed.

```
SSP:  00 00 00
```

21-4 MAC:

The MAC version of SIRIUS is displayed.

```
MAC:  00 00 00
```

21-5 ADP:

The ADP version of SIRIUS is displayed.

```
ADP:  00 00 00
```

21-6 PRDID:

The prd_id version of SIRIUS is displayed.

```
PRDID:00 00 00
```

21-7 SEGID:

The seg_id version of SIRIUS is displayed.

```
SEGID:00 00 00
```

22. DVD SETTING

This mode is prepared mainly for manufacturing use.
Select “DVD ID CLR” to check the ID number (device key) of the module board.
See “Check the New ID number” for details.

22-1 DVD:

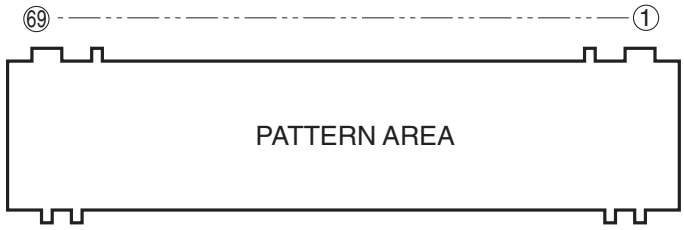
22-2 ID WRITE

22-3 ID CLEAR

22-4 REWRITE F/W

■ DISPLAY DATA

● **V1: 17-BT-32GNK (OPERATION P.C.B.)**



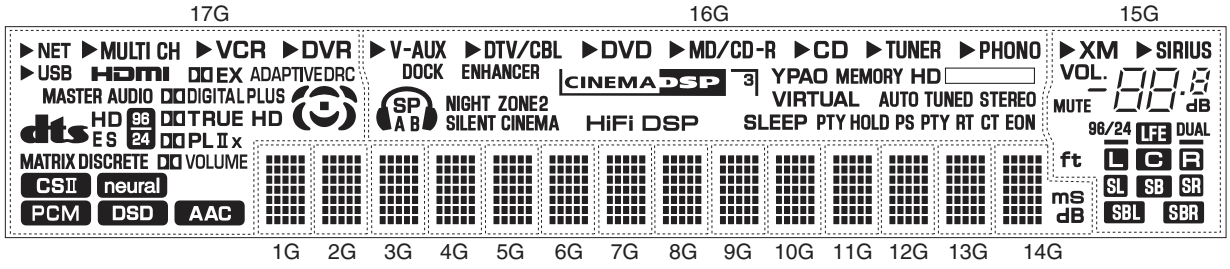
● **PIN CONNECTION**

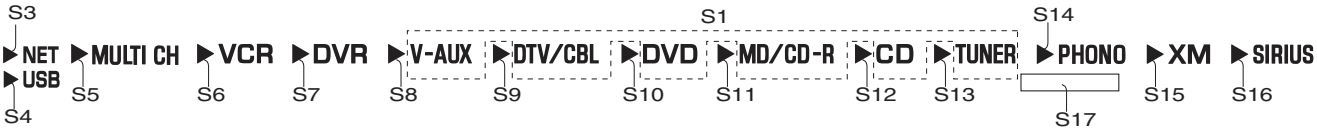
Pin No.	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35
Connection	F2	NX	NP	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	P21	P22	P23	P24	P25	P26	P27	P28	P29	P30	P31

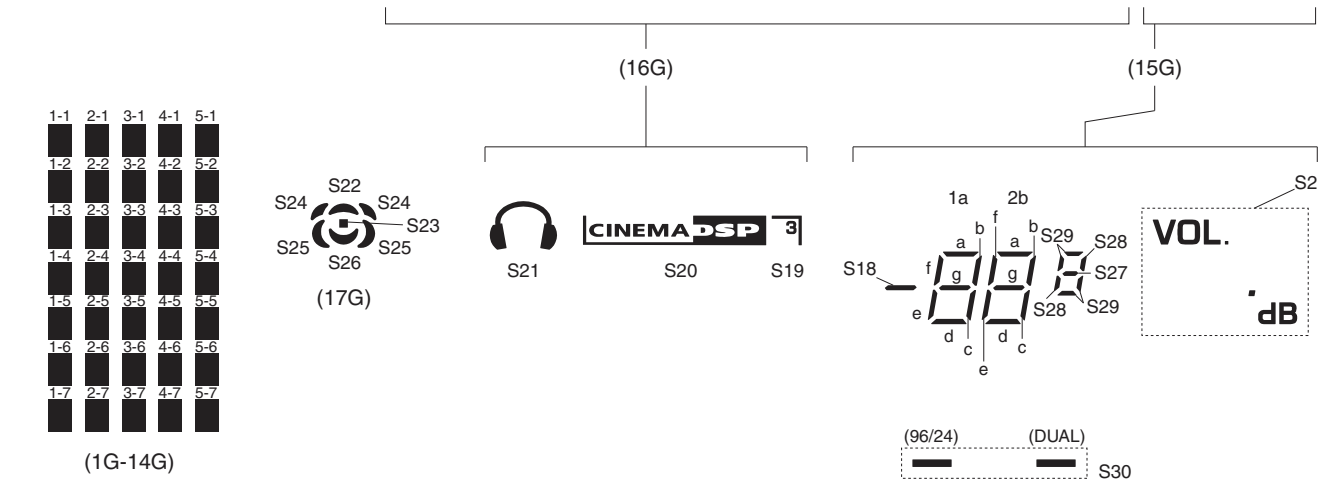
Pin No.	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Connection	P32	P33	P34	P35	P36	P37	NX	NX	NX	NX	NX	NX	NX	17G	16G	15G	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NP	NP	NX	F1

Note : 1) F1, F2 ..... Filament pin 2) NP ..... No pin 3) NX ..... No extend pin 4) 1G~17G ..... Grid pin

● **GRID ASSIGNMENT**





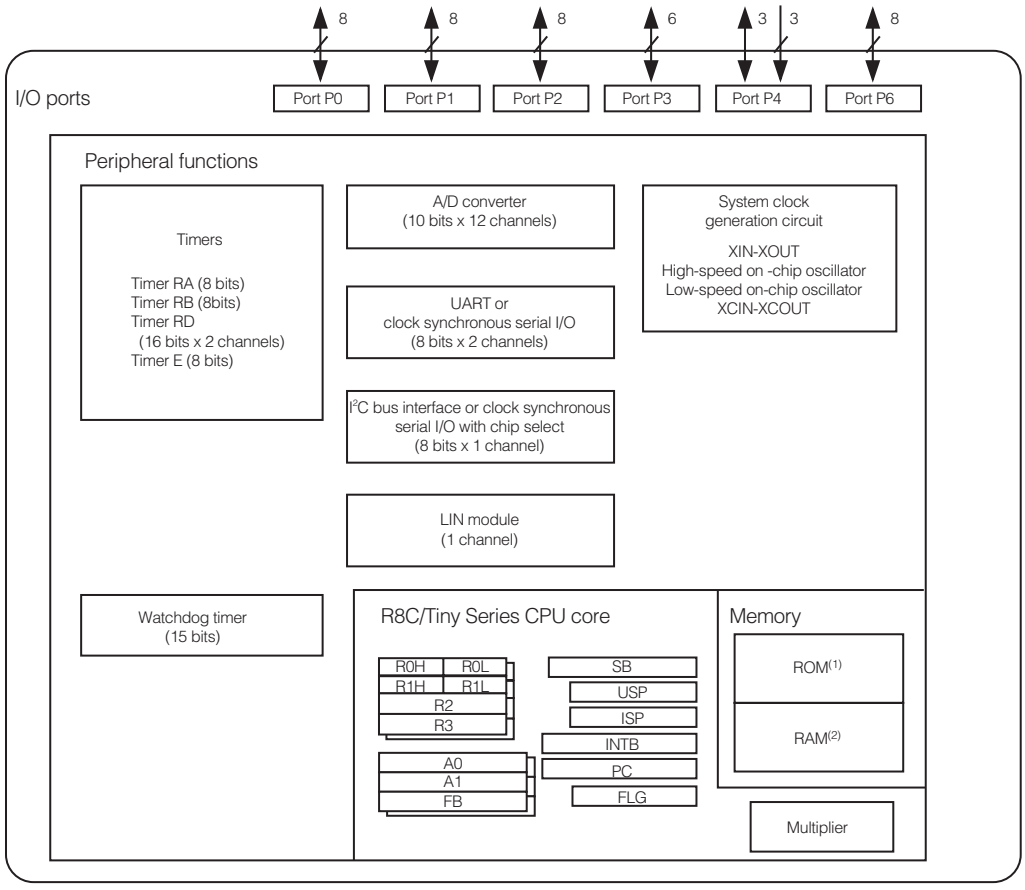


● **ANODE CONNECTION**

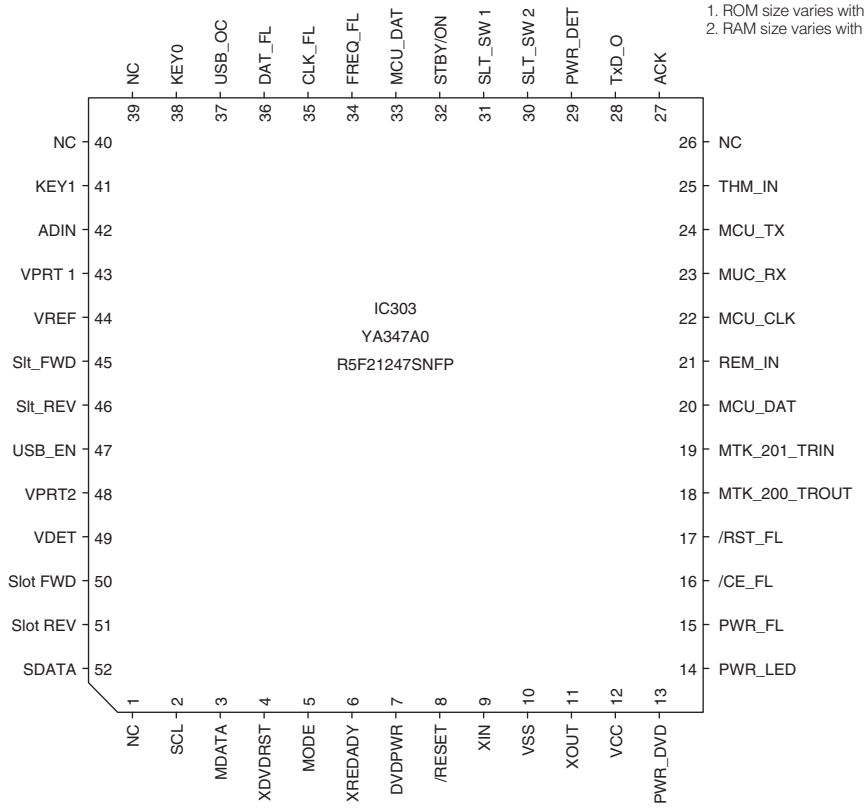
	17G	16G	15G	14G	13G-1G
1P	NET	S1	XM	1-1	1-1
2P	MULTI CH	PHONO	SIRIUS	2-1	2-1
3P	VCR	S8	S15	3-1	3-1
4P	DVR	S9	S16	4-1	4-1
5P	USB	S10	S2	5-1	5-1
6P	S3	S11	S18	1-2	1-2
7P	S5	S12	1a	2-2	2-2
8P	S6	S13	1b	3-2	3-2
9P	S7	S14	1c	4-2	4-2
10P	S4	DOCK	1d	5-2	5-2
11P	HDMI	ENHANCER	1e	1-3	1-3
12P	DD EX	S21	1f	2-3	2-3
13P	ADAPTIVE DRC	SP	1g	3-3	3-3
14P	MASTER AUDIO	A	2a	4-3	4-3
15P	dts	B	2b	5-3	5-3
16P	HD (ES)	NIGHT	2c	1-4	1-4
17P	ES	ZONE2	2d	2-4	2-4
18P	96/24	SILENT CINEMA	2e	3-4	3-4
19P	DD DIGITAL	S20	2f	4-4	4-4
20P	PLUS	S19	2g	5-4	5-4
21P	DD TRUE HD	HiFi DSP	S27	1-5	1-5
22P	DD PL	YPAO	S28	2-5	2-5
23P	II	MEMORY	S29	3-5	3-5
24P	x	HD	MUTE	4-5	4-5
25P	MATRIX	S17	96/24	5-5	5-5
26P	DISCRETE	VIRTUAL	DUAL	1-6	1-6
27P	DD VOLUME	AUTO	ft	2-6	2-6
28P	CSII	TUNED	S30	3-6	3-6
29P	neural	STEREO	LFE	4-6	4-6
30P	PCM	SLEEP	L	5-6	5-6
31P	DSD	PTY (HOLD)	C	1-7	1-7
32P	AAC	HOLD	R	2-7	2-7
33P	S22	PS	SL	3-7	3-7
34P	S23	PTY (RT)	SB	4-7	4-7
35P	S24	RT	SR	5-7	5-7
36P	S25	CT	SBL	ms	–
37P	S26	EON	SBR	dB	–

■ IC DATA

IC303: R5F21247SNFP (FRONT P.C.B.)
Sub-microprocessor



NOTES:
1. ROM size varies with MCU type.
2. RAM size varies with MCU type.



Pin No.	Function Name	Port Name	I/O	Detail of function	
1	NC				
2	SCL	P3_5	S-CLK	SCLK	DVD
3	MDATA	P3_3	S-Rx	MDATA	DVD
4	XDVDRST	P3_4	O	XDVDRST	DVD
5	MODE				
6	XREDADY	P4_3	O	XREADY	DVD
7	DVDPWR	P4_4	O	DVDPOWER	DVD
8	/RESET				
9	XIN	P4_7		20MHz	
10	VSS				
11	XOUT	P4_6		20MHz	
12	VCC				
13	PWR_DVD	P2_7	O	DVD_PS: DVD power supply control (H: ON/NonTuner, L: OFF/Tuner)	Front
14	PWR_LED	P2_6	O	PDLED: Power on LED (H: ON, L: OFF)	Front
15	PWR_FL	P2_5	O	PWR_FL: Power supply control of FL driver (H: ON, L: OFF)	Front
16	/CE_FL	P2_4	O	FL driver CE OUT	Front
17	/RST_FL	P2_3	O	FL driver RESET (turn off) OUT	Front
18	MTK_200_TROUT	P2_2	O	Tray open	DVD
19	MTK_201_TRIN	P2_1	O	Cramp Fin	DVD
20	MCU_DAT	P2_0	I (Timer)	Transmission request interrupt from main to sub (Event capture function)	MainMCU
21	REM_IN	P1_7	I (INT)	Remote control input *2	Front
22	MCU_CLK	P1_6	I (S-CLK)	Communication clock between MAIN and SUB	MainMCU
23	MUC_RX	P1_5	S-Rx	Communication data reception between MAIN and SUB	MainMCU
24	MCU_TX	P1_4	S-Tx	Communication data transmission between MAIN and SUB	MainMCU
25	THM_IN	P1_3	I	Temperature detection	
26	NC	NC			
27	ACK	P4_5	I	ACK	DVD
28	TxD_O	P6_6	S-Tx		Front
29	PWR_DET	P6_7	I	No used / PowerDownDetectIN	
30	SLT_SW 2	P1_2	I (INT)	SlotIn detect 1	Loader
31	SLT_SW 1	P1_1	I (INT)	SlotIn detect 2	Loader
32	STBY/ON	P1_0	I (Timer)	Terminal for interrupt of key input	Front
33	MCU_DAT	P3_1	O	Ready signal from SUB to MAIN / Interrupt request	MainCPU
34	FREQ_FL	P3_0	O	No used / FL drive clock output (pulse output mode)	
35	CLK_FL	P6_5	O (S-CLK)	Communication clock of the FL display	Front
36	DAT_FL		O	Communication data of the FL display is transmitted	Front
37	USB_OC	P6_3	I	Overcurrent detection	USB
38	KEY0	P0_7	I (AD)	Key0 input	Front
39	NC				
40	NC				
41	KEY1	P0_6	I (AD)	Key1 input	Front
42	ADIN	P0_5	I	No used / Model distinction input	
43	VPRT 1	P0_4	I (AD)	Power supply voltage detection 1	CU
44	VREF	P4_2		Standard voltage IN	
45	Slt_FWD	P6_0	O	Loader FWD	Loader
46	Slt_REV	P6_2	O	Loader REV	Loader
47	USB_EN	P6_1	O	Enable	USB
48	VPRT2	P0_3	I (AD)	Power supply voltage detection 2	CU
49	VDET	P0_2	I (AD)	VDET	DVD
50	Slot FWD	P0_1	I	Tray FWD	DVD
51	Slot REV	P0_0	I	Tray REV	DVD
52	SDATA	P3_7	S-Tx	SDATA	DVD

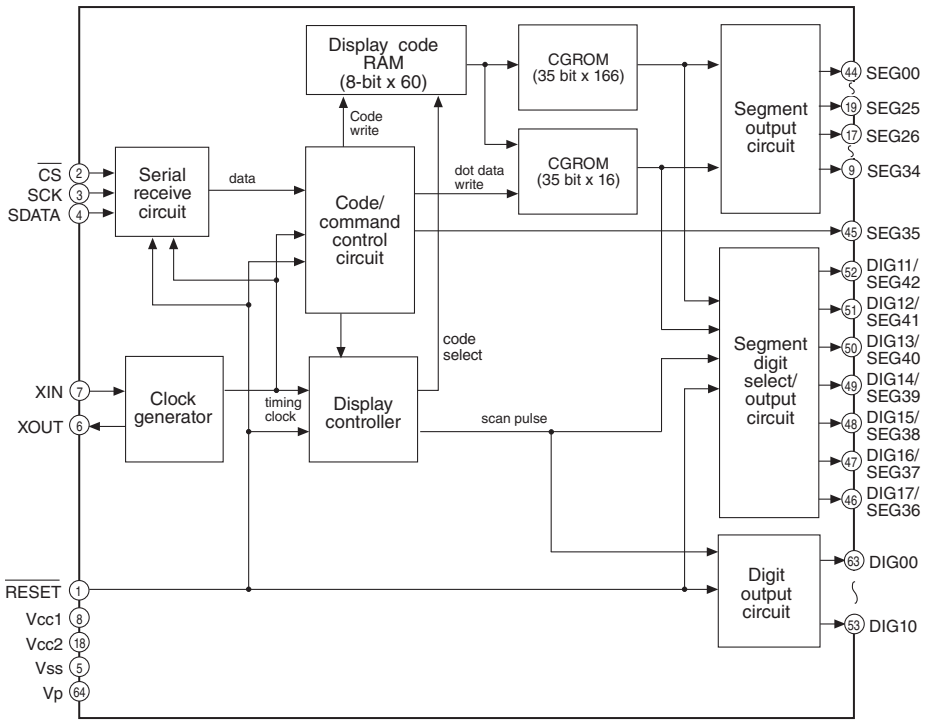
Detection for AD port: KEY0 (39 pin of sub-microprocessor IC303 of OPERATION P.C.B.)
KEY1 (41 pin of sub-microprocessor IC303 of OPERATION P.C.B.)

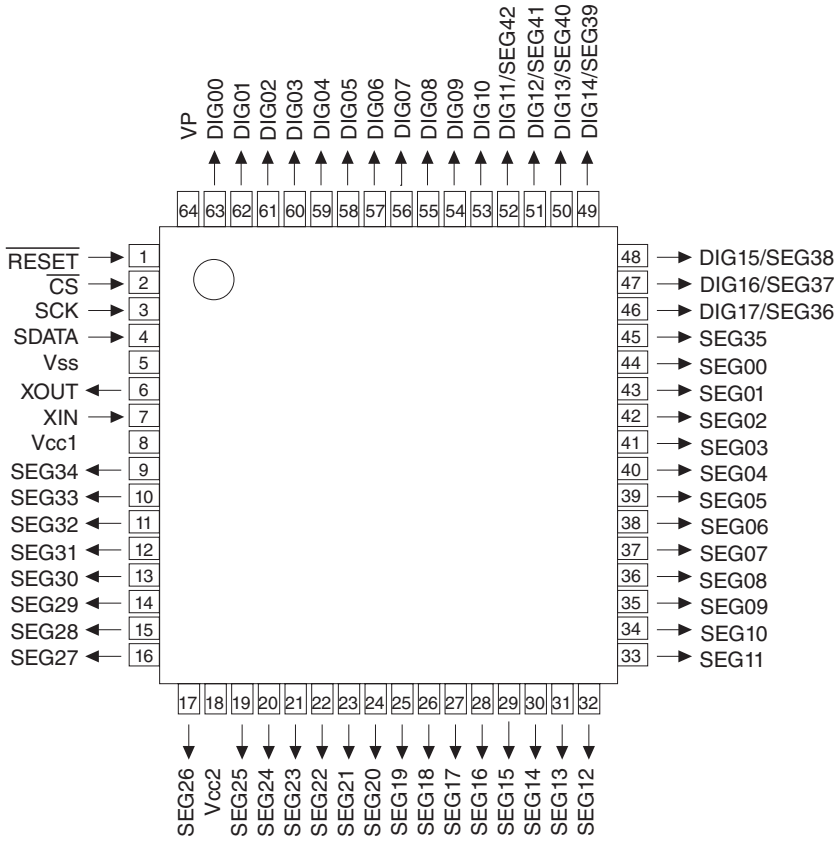
Key Input(A-D) Pull-Up Resistance 10 k-Ohms

Ohm	0	+ 680	+ 680	+ 15k	+ 13.5k
V	0 – 0.2	0.2 – 0.4	0.5 – 1.8	1.9 – 3.4	3.5 – 4.0
A/D value	0 – 8	10 – 20	24 – 94	95 – 175	176 – 206
KEY0 (39 pin)	—	EJECT	PLAY	VOLUME UP	VOLUME DOWN

Ohm	0	+ 1.2k	+ 1.2k	+ 12.7k	+ 5.3k	+ 2.7k
V	0 – 0.1	0.3 – 0.7	0.8 – 1.7	1.8 – 2.7	2.8 – 3.2	3.3 – 3.6
A/D value	0 – 14	15 – 38	39 – 89	90 – 141	142 – 166	167 – 184
KEY1 (41 pin)	—	—	STOP	INPUT	—	PAUSE

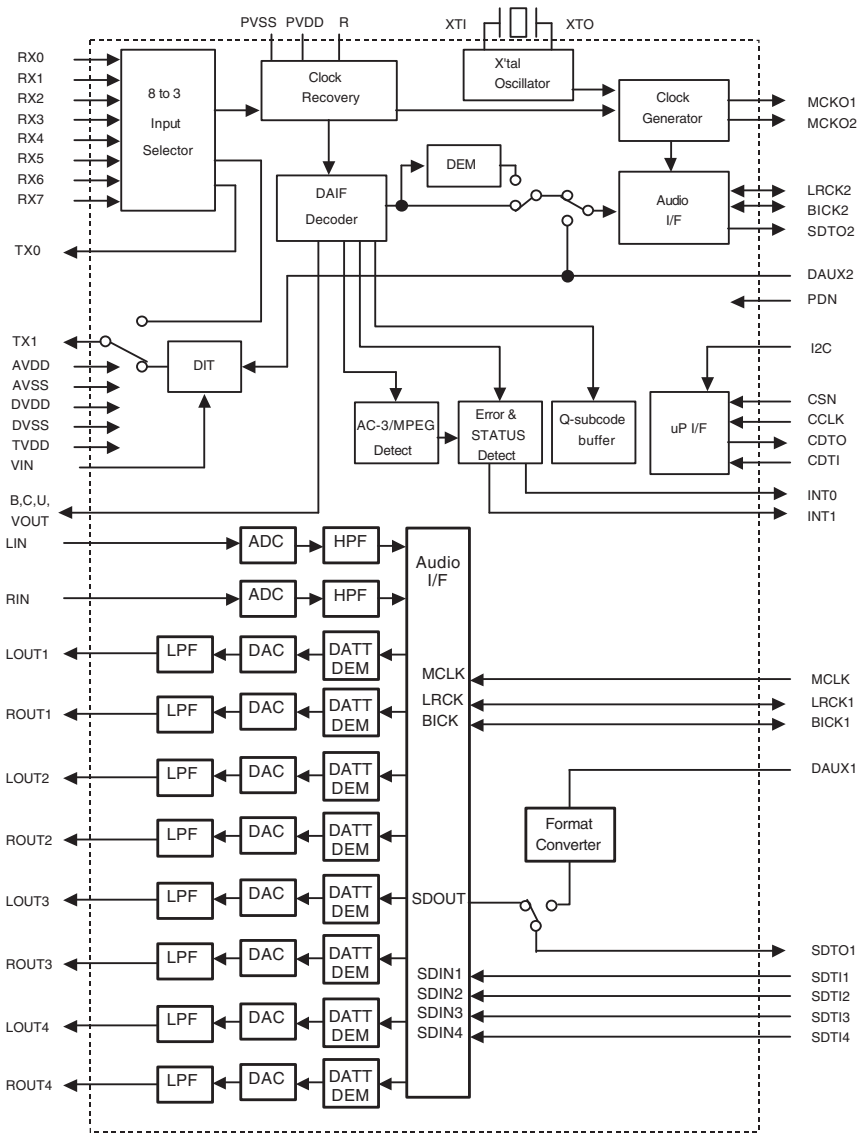
IC1: M66003-0131FP (OPERATION P.C.B.)
FL display driver

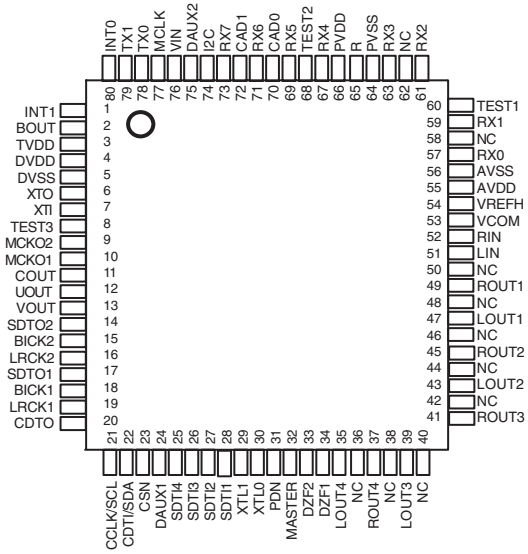




No.	Port Name	Function Name	I/O	Detail of Function
1	RESET	/RESET	Reset input	When “L”, M66003 is initialized.
2	CS	/CEFL	Chip select input	When “L”, communication with the MCU is possible.
3	SCK	CKFL	Shift clock input	When “H”, any instruction from the MCU is neglected.
4	SDATA	DTFL	Serial data input	Serial input data is taken and shifted by the positive edge of SCK.
5	Vss	VSS		GND (0V)
6	XOUT	XOUT	Clock out	When use as a CR oscillator, connect external resistor and capacitor.
7	XIN	XIN	Clock in	When use an external clock input external clock to XIN, and XOUT must be opened.
8	Vcc1	VDD		Positive power supply for internal logic.
9	SEG34	P1I	Segment output	Connect to segment (anode) pins of VFD.
10	SEG33	P2		
11	SEG32	P3		
12	SEG31	P4		
13	SEG30	P5		
14	SEG29	P6		
15	SEG28	P7		
16	SEG27	P8		
17	SEG26	P9		
18	Vcc2	VDD		Positive power supply for DIG and SEG outputs.
19	SEG25	P10	Segment output	Connect to segment (anode) pins of VFD.
20	SEG24	P11		
21	SEG23	P12		
22	SEG22	P13		
23	SEG21	P14		
24	SEG20	P15		
25	SEG19	P16		
26	SEG18	P17		
27	SEG17	P18I		
28	SEG16	P19		
29	SEG15	P20		
30	SEG14	P21		
31	SEG13	P22		
32	SEG12	P23		
33	SEG11	P24		
34	SEG10	P25		
35	SEG09	P26		
36	SEG08	P27		
37	SEG07	P28		
38	SEG06	P29		
39	SEG05	P30		
40	SEG04	P31		
41	SEG03	P32		
42	SEG02	P33		
43	SEG01	P34		
44	SEG00	P35		
45	SEG35	P36		
46	SEG36	P37		
47	DIG16/SEG37	G17I	Digital output	Connect to digit (grid) pins of VFD.
48	DIG15/SEG38	G16I		
49	DIG14/SEG39	G15I		
50	DIG13/SEG40	G14		
51	DIG12/SEG41	G13		
52	DIG11/SEG42	G12		
53	DIG10	G11		
54	DIG09	G10		
55	DIG08	G9		
56	DIG07	G8		
57	DIG06	G7		
58	DIG05	G6		
59	DIG04	G5		
60	DIG03	G4		
61	DIG02	G3		
62	DIG01	G2		
63	DIG00	G1		
64	VP	VP		Negative power supply to pull down.

IC1: AK4588VQ (MAIN P.C.B.)
2/8-channel audio CODEC with DIR





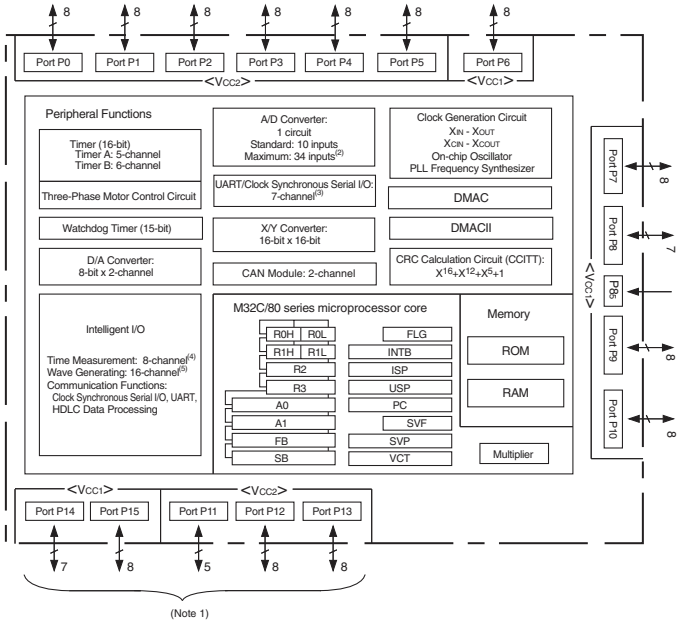
Pin No.	Function Name	I/O	Detail of Function
1	INT1	O	Interrupt 1 pin
2	BOUT	O	Block-start output pin for receiver input “H” during first 40 flames
3	TVDD	–	Output buffer power supply pin, 2.7 V to 5.5 V
4	DVDD	–	Digital power supply pin, 4.5 V to 5.5 V
5	DVSS	–	Digital ground pin
6	XTO	O	X'tal clock output pin
7	XTI	I	X'tal / External clock input pin
8	TEST3	I	Test 3 pin This pin should be connected to DVSS
9	MCKO2	O	Master clock output 2 pin
10	MCKO1	O	Master clock output 1 pin
11	COUT	O	C-bit output pin for receiver input
12	UOUT	O	U-bit output pin for receiver input
13	VOUT	O	V-bit output pin for receiver input
14	SDTO2	O	Audio serial data output pin (DIR/DIT part)
15	BICK2	I/O	Audio serial data clock pin (DIR/DIT part)
16	LRCK2	I/O	Channel clock pin (DIR/DIT part)
17	SDTO1	O	Audio serial data output pin (ADC/DAC part)
18	BICK1	I/O	Audio serial data clock pin (ADC/DAC part)
19	LRCK1	I/O	Input channel clock pin
20	CDTO	O	Control data output pin in serial mode, I2C pin= “L”
21	CCLK	I	Control data clock pin in serial mode, I2C pin= “L”
	SCL	I	Control data clock pin in serial mode, I2C pin= “H”
22	CDTI	I	Control data input pin in serial mode, I2C pin= “L”
	SDA	I/O	Control data pin in serial mode, I2C pin= “H”
23	CSN	I	Chip select pin in serial mode, I2C pin=”L”
		I	This pin should be connected to DVSS, I2C pin=”H”
24	DAUX1	I	AUX audio serial data input pin (ADC/DAC part)
25	SDTI4	I	DAC4 audio serial data input pin
26	SDTI3	I	DAC3 audio serial data input pin
27	SDTI2	I	DAC2 audio serial data input pin
28	SDTI1	I	DAC1 audio serial data input pin
29	XTL1	I	X'tal frequency select 0 pin
30	XTL0	I	X'tal frequency select 1 pin
31	PDN	I	Power-down mode pin When “L”, the AK4588 is powered-down, all output pin goes “L”, all registers are reset When CAD1-0 pins are changed, the AK4588 should be reset by PDN pin
32	MASTER	I	Master mode select pin “H”: Master mode, “L”: Slave mode

Pin No.	Function Name	I/O	Detail of Function
33	DZF2	O	Zero input detect 2 pin When the input data of the group 1 follow total 8192 LRCK cycles with “0” input data, this pin goes to “H” / When RSTN1 bit is “0” or PWDAN bit is “0”, this pin goes to “H”
	OVF	O	Analog input overflow detect pin This pin goes to “H” if the analog input of L ch or R ch overflows This pin becomes OVF pin if OVFE bit is set to 1
34	DZF1	O	Zero input detect 1 pin When the input data of the group 1 follow total 8192 LRCK cycles with “0” input data, this pin goes to “H” / When RSTN1 bit is “0” or PWDAN bit is “0”, this pin goes to “H”
35	LOUT4	O	DAC4 L ch analog output pin
36	NC	–	No connect pin No internal bonding / This pin should be opened
37	ROUT4	O	DAC4 R ch analog output pin
38	NC	–	No connect pin No internal bonding / This pin should be opened
39	LOUT3	O	DAC3 L ch analog output pin
40	NC	–	No connect pin No internal bonding / This pin should be opened
41	ROUT3	O	DAC3 R ch analog output pin
42	NC	–	No connect pin No internal bonding / This pin should be opened
43	LOUT2	O	DAC2 L ch analog output pin
44	NC	–	No connect pin No internal bonding / This pin should be opened
45	ROUT2	O	DAC2 R ch analog output pin
46	NC	–	No connect pin No internal bonding / This pin should be opened
47	LOUT1	O	DAC1 L ch analog output pin
48	NC	–	No connect pin No internal bonding / This pin should be opened
49	ROUT1	O	DAC1 R ch analog output pin
50	NC	–	No connect pin No internal bonding / This pin should be opened
51	LIN	I	L ch analog input pin
52	RIN	I	R ch analog input pin
53	VCOM	–	Common voltage output pin 2.2 F capacitor should be connected to AVSS externally
54	VREFH	–	Positive voltage reference input pin, AVDD
55	AVDD	–	Analog power supply pin, 4.5 V to 4.5 V
56	AVSS	–	Analog ground pin, 0 V
57	RX0	I	Receiver channel 0 pin (Internal biased pin / Internally biased at PVDD/2)
58	NC	–	No connect pin No internal bonding / This pin should be connected to PVSS
59	RX1	I	Receiver channel 1 pin (Internal biased pin / Internally biased at PVDD/2)
60	TEST1	I	Test 1 pin This pin should be connected to PVSS

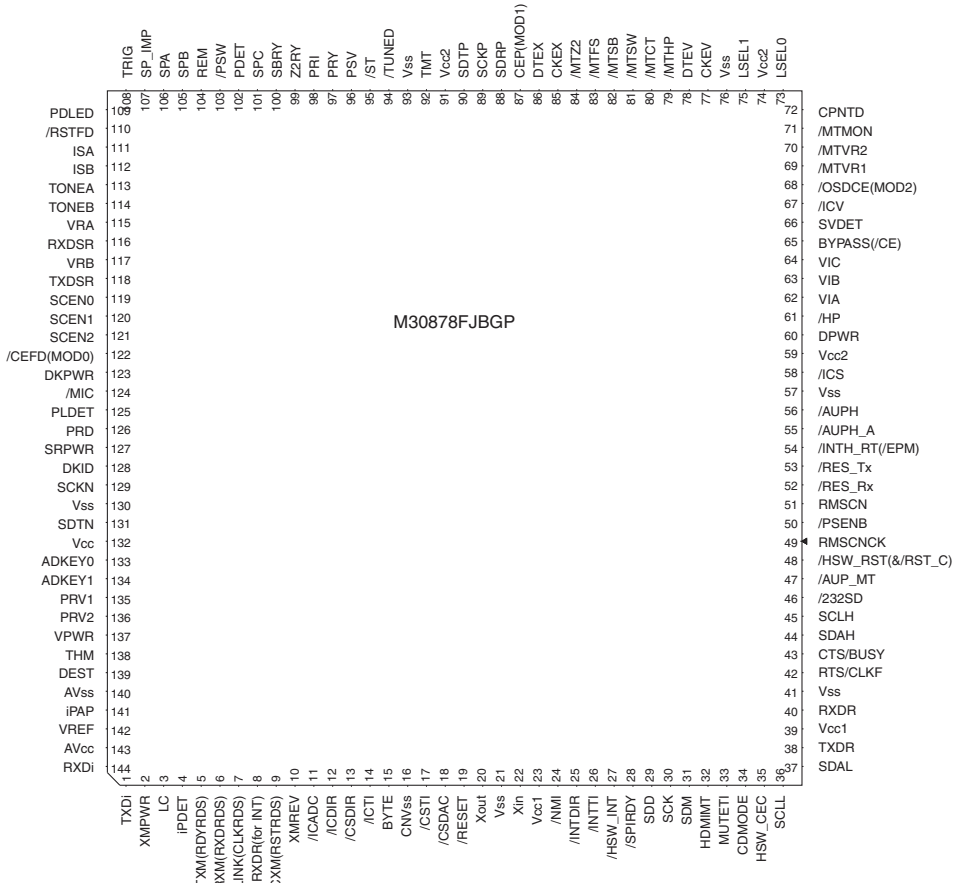
Pin No.	Function Name	I/O	Detail of Function
61	RX2	I	Receiver channel 2 pin (Internal biased pin / Internally biased at PVDD/2)
62	NC	–	No connect pin No internal bonding / This pin should be connected to PVSS
63	RX3	I	Receiver channel 3 pin (Internal biased pin / Internally biased at PVDD/2)
64	PVSS	–	PLL ground pin
65	R	–	External resistor pin 12 k-ohms +/-1 % resistor should be connected to PVSS externally
66	PVDD	–	PLL power supply pin, 4.5 V to 4.5 V
67	RX4	I	Receiver channel 4 pin (Internal biased pin / Internally biased at PVDD/2)
68	TEST2	I	Test 2 pin This pin should be connected to PVSS
69	RX5	I	Receiver channel 5 pin (Internal biased pin / Internally biased at PVDD/2)
70	CAD0	I	Chip address 0 pin (ADC/DAC part)
71	RX6	I	Receiver channel 6 pin (Internal biased pin / Internally biased at PVDD/2)
72	CAD1	I	Chip address 1 pin (ADC/DAC part)
73	RX7	I	Receiver channel 7 pin (Internal biased pin / Internally biased at PVDD/2)
74	I2C	I	Control mode select pin “L”: 4-wire serial, “H”: I2C bus
75	DAUX2	I	Auxiliary audio data input pin (DIR/DIT part)
76	VIN	I	V-bit input pin for transmitter output
77	MCLK	I	Master clock input pin
78	TX0	O	Transmit channel (through data) output 0 pin
79	TX1	O	Transmit channel output 1 pin When TX bit = “0”, transmit channel (through data) output 1 pin. When TX bit = “1”, transmit channel (DAUX2 data) output pin (default)
80	INT0	O	Interrupt 0 pin

Note: All input pins except internal biased pins and internal pull-down pin should not be left floating.

IC500: M30878FJBGP (MAIN P.C.B.)
Main microprocessor



NOTES:
1. Ports P11 to P15 are provided in the 144-pin package only.
2. Included in the 144-pin package only. 26 inputs maximum in the 100-pin package.
3. 6-channel available in the 100-pin package.
4. 6-channel available in the 100-pin package.
5. 10-channel available in the 100-pin package.



Pin No.	Port Name	Function Name (P.C.B.)	I/O		Detail of function
1	TXD4	TXDi	PowerOn	SO	Asynchronous data output for iPod
	P96/ANEX1/TXD4/ SDA4/SRXD4		Standby	O	
			MCUSleep	O	
2	P95	/PWR_XM	PowerOn	O	Power control output for XM antenna H: OFF, L: ON (U, C models)
	P95/ANEX0/CLK4		Standby	O	
			MCUSleep	O	
3	P94		PowerOn	O	No connected
	P94/DA1/TB4in/ CTS4/RTS4/SS4		Standby	O	
			MCUSleep	O	
4	TB3in	iPDET	PowerOn	TMR	iPod loaded in DOCK detect
	P93/DA0/TB3in/ CTS3/RTS3/SS3		MCUSleep	O	
5	TXD3	SDO_XM	PowerOn	SO	Asynchronous data output for XM/DT IC (U, C models)
	P92/TB2in/TXD3/ SDA3/		Standby	O	
	SRXD3/OUTC20/ IEout/ISTXD2		MCUSleep	O	
6	RXD3	SDI_XM_RDS	PowerOn	SI	Asynchronous data input for XM/DT IC (U, C models)
	P91/TB1in/RXD3/ SCL3/		Standby	O	
	STXD3/IEin/ ISRXD2		Sleep	O	
			PowerOn	SI	Synchronous data input for RDS IC (G model)
			Standby	O	
			MCUSleep	O	
7	CLK3	CLK_RDS	PowerOn	SO	Synchronous clock output for RDS IC (G model)
			Standby	O	
			MCUSleep	O	
8	INT8	/INT_OTW_DAMP	PowerOn	IRQ	Interrupt input for D-AMP TAS5342 overheat detect Pull-up required because of open drain Wired OR from each of TAS5342
	P146/INT8		MCUSleep	O	
9	P145	/IC_XM	PowerOn	O	Reset output for XM/DT IC (U, C models)
	P145/INT7		Standby	O	
			MCUSleep	O	
10	P144	REV_XM	PowerOn	I	ANT_REV input for XM/DT IC High: Non-compatible antenna
	P144/INT6		Standby	O	
			MCUSleep	O	
11	P143	/PDN_DIR	PowerOn	O	Power down output for AK4388
	P143/INPC17/ OUTC17		Standby	O	
			MCUSleep	O	
12	P142		PowerOn	O	No connected
	P142/INPC16/ OUTC16		Standby	O	
			MCUSleep	O	
13	P141	/CS_DIR	PowerOn	CS	Chip select output for AK4388
	P141/INPC15/ OUTC15		Standby	O	
			MCUSleep	O	
14	P140	/IC_DSP	PowerOn	O	Initial clear output for TI (DA70Y)
	P140/INPC14/ OUTC14		Standby	O	
			MCUSleep	O	
15	BYTE	BYTE	All	MCU	When set to single chip mode: Vss
16	CNVss	CNVss	All	MCU	Processor mode select Low: Single chip mode High: To Flash included boot mode To boot mode with hardware resetting of P50=H, P55=L, CNVss=H

Pin No.	Port Name	Function Name (P.C.B.)	I/O		Detail of function
17	P87	/CS_DSP	PowerOn	CS	Chip select output for TI (DA70Y)
	P87/Xcin		Standby	O	
			MCUSleep	O	
18	P86		PowerOn	O	No connected
	P86/Xcout		Standby	O	
			MCUSleep	O	
19	RESET	/RESET	All	MCU	Reset
20	Xout	Xout	All	MCU	
21	Vss	Vss	All	MCU	
22	Xin	Xin	All	MCU	
23	Vcc1	Vcc	All	MCU	
24	NMI	/NMI	PowerOn	MCU	Unused, connect to Vcc
	P85/NMI		Standby	I	
			MCUSleep		
25	INT2	INT_DIR	PowerOn	IRQ	Interrupt input for AK4388 error
	P84/INT2		Standby	O	
			MCUSleep	O	
26	INT1	/INT_DSP	PowerOn	IRQ	Interrupt input for TI (DA70Y)
	P83/INT1		Standby	O	
			MCUSleep	O	
27	INT0	/INT_SD_DAMP	PowerOn	IRQ	Interrupt input for D-AMP TAS5342 shutdown detect Pull-up required because of open drain Wired OR from each of TAS5342
	P82/INT0		Standby	O	
			MCUSleep	O	
28	P81	/SPIRDY_DSP	PowerOn	I	DSP SPIRDY signal
	P81/TA4in/U/ INPC15/OUTC15/		Standby	O	
	CTS5/RTS5/RTP23		MCUSleep	O	
29	RXD5	SDI_DIR_DSP	PowerOn	SI	Synchronous data input for DIR and DSP DIR: LSBF, DSP: MSBF
	P80/TA4out/U/ ISRXD0/RXD5		Standby	O	
			MCUSleep	O	
30	CLK5	SCK_DIR_DSP	PowerOn	SO	Synchronous clock output for DIR and DSP
	P77/TA3in/INPC14/ OUTC14/		Standby	O	
	ISCLK0/CLK5/ RTP22		MCUSleep	O	
31	TXD5	SDO_DIR_DSP	PowerOn	SO	Synchronous data output for DIR and DSP DIR: LSBF DSP: MSBF
	P76/TA3out/ INPC13/OUTC13/		Standby	O	
	ISTXD0/TXD5		MCUSleep	O	
32	P75	SDTO_DIR	PowerOn	I	DIR DATA input for CDDA writing
	P75/TA2in/W/ INPC12/OUTC12/		Standby	O	
	ISRXD1/RTP21		Sleep	O	
33	P74	MUTE_DSP	PowerOn	O	Mute output (High=MUTE) for TI (DA70Y)
	P74/TA2out/W/ INPC11/		Standby	O	
	OUTC11/ISCLK1/ RTP20		MCUSleep	O	
34	P73		PowerOn	O	No connected
	P73/TA1in/V/CTS2/ RTS2/SS2/		Standby	O	
	INPC10/OUTC10/ ISTXD1		MCUSleep	O	

Pin No.	Port Name	Function Name (P.C.B.)	I/O		Detail of function
35	P72	LRCK_DIR	PowerOn	I	DIR WCK input for CDDA writing
	P72/TA1out/V/ CLK2		Standby	O	
			MCUSleep	O	
36	SCL2	SCL_EPR	PowerOn	SIO	I2C clock input/output for EEPROM
	P71/TA0in/TB5in/ RXD2/SCL2/ STXD2/INPC17/		Standby	O	
	OUTC17/OUTC22/ ISRXD2/IEin/ RTP03		MCUSleep	O	
37	SDA2	SDA_EPR	PowerOn	SIO	I2C data input/output for EEPROM
	P70/TA0out/TXD2/ SDA2/SRXD2/ INPC16/		Standby	O	
	OUTC16/OUTC20/ ISTXD2/IEout/ RTP02		MCUSleep	O	
38	SDA1	TXD_FLASH	When writing YDC	SO	Data output for AF220
	P67/TXD1/SDA1/ SRXD1		Standby	O	
			MCUSleep	O	
39	Vcc1	Vcc	All	MCU	Power source of microprocessor +5BU
40	RXD1	RXD_FLASH	When writing YDC	SI	Data input for AF220
	P66/RXD1/SCL1/ STXD1		Standby	O	
			MCUSleep	O	
41	Vss	Vss	All	MCU	Ground of microprocessor
42	CLK1	CLK_FLASH	When writing YDC	SI	Clock input for AF220
	P65/CLK1		Standby	O	
			MCUSleep	O	
43	RTS1	BUSY_FLASH	When writing YDC	SO	BUSY output for AF220
	P64/CTS1/RTS1/ SS1/OUTC21/ ISCLK2		Standby	O	
			MCUSleep	O	
44	SDA0	SDA_PWM	PowerOn	SIO	I2C data input/output for TAS5086 TAS5086
	P63/TXD0/SDA0/ SRXD0/IrDAout		Standby	O	
			MCUSleep	O	
45	SCL0	SCL_PWM	PowerOn	SIO	I2C clock input/output for TAS5086 TAS5086
	P62/RXD0/SCL0/ STXD0/IrDAin		Standby	O	
			MCUSleep	O	
46	P61		PowerOn	O	No connected
	P61/CLK0/RTP01		Standby	O	
			MCUSleep	O	
47	P60		PowerOn	O	No connected
			Standby	O	
			MCUSleep	O	
48	P137		PowerOn	O	No connected
	P137/OUTC27		Standby	O	
			MCUSleep	O	
49	P136		PowerOn	O	No connected
	P136/OUTC21/ ISCLK2		Standby	O	
			MCUSleep	O	
50	P135		PowerOn	O	No connected
	P135/OUTC22/ ISRXD2/IEin		Standby	O	
			MCUSleep	O	

Pin No.	Port Name	Function Name (P.C.B.)	I/O		Detail of function
51	P134		PowerOn	O	No connected
	P134/OUTC20/ ISTXD2/Ieout		Standby	O	
			MCUSleep	O	
52	P57		PowerOn	O	No connected
	P57/RDY		Standby	O	
			MCUSleep	O	
53	P56		PowerOn	O	No connected
	P56/ALE		Standby	O	
			MCUSleep	O	
54	P55	/EPM	PowerOn	I	47k-ohms pull down for flash write mode
	P55/HOLD		Standby	O	
			MCUSleep	O	
55	P54		PowerOn	O	No connected
	P54/HLDA/ALE		Standby	O	
			MCUSleep	O	
56	P133		PowerOn	O	No connected
	P133/OUTC23		Standby	O	
			MCUSleep	O	
57	Vss	Vss	All	MCU	
58	P132		PowerOn	O	No connected
	P132/OUTC26		Standby	O	
			MCUSleep	O	
59	Vcc2	Vcc	All	MCU	
60	P131		PowerOn	O	No connected
	P131/OUTC25		Standby	O	
			MCUSleep	O	
61	P130		PowerOn	O	No connected
	P130/OUTC24		Standby	O	
			MCUSleep	O	
62	P53		PowerOn	O	No connected
	P53/CLKout/BCLK/ ALE		Standby	O	
			MCUSleep	O	
63	P52		PowerOn	O	No connected
	P52/RD		Standby	O	
			MCUSleep	O	
64	P51		PowerOn	O	No connected
	P51/WRH/BHE		Standby	O	
			MCUSleep	O	
65	P50	/CE	PowerOn	I	For flash write mode
	P50/WRL/WR		Standby	O	
			MCUSleep	I	
66	P127		PowerOn	O	No connected
	P127		Standby	O	
			MCUSleep	O	
67	P126		PowerOn	O	No connected
	P126		Standby	O	
			MCUSleep	O	
68	P125		PowerOn	O	No connected
	P125		Standby	O	
			MCUSleep	O	
69	P47		PowerOn	O	No connected
	P47/SC0/A23		Standby	O	
			MCUSleep	O	

Pin No.	Port Name	Function Name (P.C.B.)	I/O		Detail of function
70	P46		PowerOn	O	No connected
	P46/SC1/A22		Standby	O	
			MCUSleep	O	
71	P45		PowerOn	O	No connected
	P45/SC2/A21		Standby	O	
			MCUSleep	O	
72	P44		PowerOn	O	No connected
	P44/SC3/A20		Standby	O	
			MCUSleep	O	
73	P43		PowerOn	O	No connected
	P43/A19		Standby	O	
			MCUSleep	O	
74	Vcc2	Vcc	All	MCU	
75	P42		PowerOn	O	No connected
	P42/A18		Standby	O	
			MCUSleep	O	
76	Vss	Vss	All	MCU	
77	P41		PowerOn	O	No connected
	P41/A17		Standby	O	
			MCUSleep	O	
78	P40		PowerOn	O	No connected
	P40/A16		Standby	O	
			MCUSleep	O	
79	P37		PowerOn	O	No connected
	P37/A15(/D15)		Standby	O	
			MCUSleep	O	
80	P36	CLK_SEL_A	PowerOn	O	Clock Select
	P36/A14(/D14)		Standby	O	
			MCUSleep	O	
81	P35	CLK_SEL_B	PowerOn	O	Clock Select
	P35/A13(/D13)		Standby	O	
			MCUSleep	O	
82	P34	/MUTE_PWM	PowerOn	O	Mute signal for TAS5086
	P34/A12(/D12)		Standby	O	
			MCUSleep	O	
83	P33	/PDN_PWM	PowerOn	O	Power down signal for TAS5086
	P33/A11(/D11)		Standby	O	
			MCUSleep	O	
84	P32	/RST_PWM	PowerOn	O	Reset signal for TAS5086
	P32/A10(/D10)		Standby	O	
			MCUSleep	O	
85	P31	CK_SEL	PowerOn	O	Flip-flop synchronous clock output for expansion input selector
	P31/A9(/D9)		Standby	O	
			MCUSleep	O	
86	P124	DT_SEL	PowerOn	O	Flip-flop synchronous data output for expansion input selector
	P124		Standby	O	
			MCUSleep	O	
87	P123	CE_TUNER	PowerOn	CS	Chip enable output for tuner PLL
	P123/CTS6/RTS6		Standby	O	
			MCUSleep	O	
88	RXD6	SDI_TUNER	PowerOn	SI	Synchronous data input for both tuner PLL
	P122/RXD6		Standby	O	
			MCUSleep	O	

Pin No.	Port Name	Function Name (P.C.B.)	I/O		Detail of function
89	CLK6	SCK_TUNER	PowerOn	SO	Synchronous clock output for both tuner PLL
	P121/CLK6		Standby	O	
			MCUSleep	O	
90	TXD6	SDO_TUNER	PowerOn	SO	Synchronous data output for both tuner PLL
	P120/TXD6		Standby	O	
			MCUSleep	O	
91	Vcc2	Vcc	All	MCU	
92	P30	MUTE_TUNER	PowerOn	O	TUNER Mute output H: Mute
	P30/A8(/D8)		Standby	O	
			MCUSleep	O	
93	Vss	Vss	All	MCU	
94	P27	/TUNED_TUNER	PowerOn	I	TUNER TUNED input
	P27/A7/(/D7)/AN27		Standby	O	
			MCUSleep	O	
95	P26	/ST_TUNER	PowerOn	I	TUNER STEREO input
	P26/A6/(/D6)/AN26		Standby	O	
			MCUSleep	O	
96	P25	PSV	PowerOn	O	+5S ON/OFF control * +5S is OFF in the sleep mode so as to reduce wasteful power consumption when set to low power consumption (Mute circuit, pull up, etc.)
	P25/A5/(/D5)/AN25		Standby	O	
			MCUSleep	O	
97	P24	PWR_RY	PowerOn	O	Power relay control
	P24/A4/(/D4)/AN24		Standby	O	
			MCUSleep	O	
98	P23		PowerOn	O	No connected
	P23/A3/(/D3)/AN23		Standby	O	
			MCUSleep	O	
99	P22		PowerOn	O	No connected
	P22/A2/(/D2)/AN22		Standby	O	
			MCUSleep	O	
100	P21		PowerOn	O	No connected
	P21/A1/(/D1)/AN21		Standby	O	
			MCUSleep	O	
101	P20		PowerOn	O	No connected
	P20/A0/(/D0)/AN20		Standby	O	
			MCUSleep	O	
102	INT5	/INT_PDN_DET	PowerOn	IRQ	Interrupt input for power down detect
	P17/D15/INT5		Standby	IRQ	
			MCUSleep	O	
103	INT4	/INT_PSW_CU	PowerOn	IRQ	Interrupt input for system cable ON/OFF detect
	P16/D14/INT4		Standby	IRQ	
			MCUSleep	O	
104	INT3	INT_REM_/ READY_CU	PowerOn	IRQ	Communication for Sub-microprocessor READY signal input
	P15/D13/INT3		Standby	IRQ	
			MCUSleep	O	
105	P14	PWR_CU	PowerOn	–	No used Power supply control output for FL DRIVER IC
	P14/D12		Standby	–	
			MCUSleep	–	
106	P13	RDY_RDS	PowerOn	I	READY input for RDS IC (G model)
	P13/D11		Standby	O	
			MCUSleep	O	
107	P12	LINK_XM	PowerOn	I	LINK ACTIVE input for XM/DT IC (U, C models)
	P12/D10		Standby	O	
			MCUSleep	O	

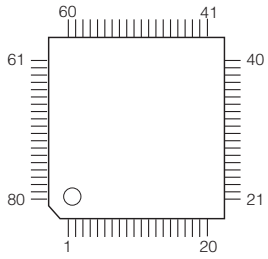
Pin No.	Port Name	Function Name (P.C.B.)	I/O		Detail of function
108	P11	RST_RDS	PowerOn	O	Reset output for RDS IC (G model)
	P11/D9		Standby	O	
			MCUSleep	O	
109	P10	PLED_IRQ_CU	PowerOn	O	IRQ signal output for Sub-microprocessor communication
	P10/D8		Standby	O	
			MCUSleep	O	
110	AN07	TEMP_DET1	PowerOn	AD	Temperature detection of power supply IC of SUB P.C.B.
	P07/D7/AN07		Standby	O	
			MCUSleep	O	
111	AN06	TEMP_DET2	PowerOn	AD	Temperature detection of power supply IC of SUB P.C.B.
	P06/D6/AN06		Standby	O	
			MCUSleep	O	
112	AN05	TEMP_DET3	PowerOn	AD	Temperature detection of power supply IC of SUB P.C.B.
	P05/D5/AN05		Standby	O	
			MCUSleep	O	
113	AN04	TEMP_DET4	PowerOn	AD	Temperature detection of power supply IC of SUB P.C.B.
	P04/D4/AN04		Standby	O	
			MCUSleep	O	
114	P114	/PWR_DOCK	PowerOn	O	DOCK power control output H: OFF, L: ON
	P114		Standby	O	
			MCUSleep	O	
115	P113		PowerOn	O	
	P113/INPC13/OUTC13		Standby	O	
			MCUSleep	O	
116	ISRXD1	RXD_SIRIUS	PowerOn	SI	Asynchronous communication data input for SIRIUS radio Serial communication is 5v TTL/CMOS logic level. (U, C models)
	P112/INPC12/OUTC12/ ISRXD1		Standby	O	
			MCUSleep	O	
117	P111	/PWR_SIRIUS	PowerOn	O	SIRIUS radio power enable output L: Power ON HiZ: Power OFF (U, C models)
	P111/INPC11/OUTC11/ ISCLK1		Standby	I	
			MCUSleep	I	
118	ISTXD1	TXD_SIRIUS	PowerOn	SO	Asynchronous communication data output for SIRIUS radio communication Serial communication is 5v TTL/CMOS logic level. (U, C models)
	P110/INPC10/OUTC10/ ISTXD1		Standby	O	
			MCUSleep	O	
119	AN03	TEMP_DET5	PowerOn	AD	Temperature detection of power supply IC of SUB P.C.B.
	P03/D3/AN03		Standby	O	
			MCUSleep	O	
120	AN02	PRV_5SUB	PowerOn	AD	AD protection Power voltage detect +5SUB
	P02/D2/AN02		Standby	I	
			MCUSleep	I	
121	P01		PowerOn	O	
	P01/D1/AN01		Standby	O	
			MCUSleep	O	
122	P00	/CE_RST_CU	PowerOn	O	RESET signal output for Sub-microprocessor communication
	P00/D0/AN00		Standby	O	
			MCUSleep	O	
123	AN157	PRV_30	PowerOn	AD	AD protection Power voltage detect +30D
	P157/AN157/CTS6/ RTS6		Standby	O	
			MCUSleep	O	
124	AN156	PRV_CU	PowerOn	AD	AD protection Power voltage detect +15D, -29VP
	P156/AN156/CLK6		Standby	O	
			MCUSleep	O	

Pin No.	Port Name	Function Name (P.C.B.)	I/O		Detail of function
125	AN155	PRV_12	PowerOn	AD	AD protection Power voltage detect +12D, +12A, +10T
	P155/AN155/RXD6		Standby	O	
			MCUSleep	O	
126	AN154	DC_PRT	PowerOn	AD	AD protection Power amplifier DC detect
	P154/AN154/TXD6		Standby	O	
			MCUSleep	O	
127	P153		PowerOn	O	
	P153/AN153/CTS5/ RTS5		Standby	O	
			MCUSleep	O	
128	ISRXD0	KEY_SDI_CU	PowerOn	SI	Synchronous data input for Sub-microprocessor communication
	P152/AN152/ISRXD0/ RXD5		Standby	O	
			MCUSleep	O	
129	ISCLK0	SCK_CU	PowerOn	SO	Synchronous clock output for Sub-microprocessor communication
	P151/AN151/ISCLK0/ CLK5		Standby	O	
			MCUSleep	O	
130	Vss	Vss	All	MCU	
131	ISTXD0	SDO_CU	PowerOn	SO	Synchronous data output for Sub-microprocessor communication
	P150/AN150/ISTXD0/ TXD5		Standby	O	
			MCUSleep	O	
132	Vcc1	Vcc	All	MCU	
133	AN7	ID_DOCK	PowerOn	AD	AD Dock ID judgment 1k-ohms Pull up
	P107/AN7/KI3/RTP33		Standby	O	
			MCUSleep	O	
134	AN6	PRV_5	PowerOn	AD	AD protection power voltages detect +5D, +5.3D
	P106/AN6/KI2/RTP32		Standby	O	
			MCUSleep	O	
135	AN5	PRV_5i	PowerOn	AD	AD protection power voltage detect +5i
	P105/AN5/KI1/RTP31		Standby	O	
			MCUSleep	O	
136	AN4	PRV_3.3	PowerOn	AD	AD protection power voltage detect +3.3D
	P104/AN4/KI0/RTP30		Standby	O	
			MCUSleep	O	
137	AN3	PRV_1.2	PowerOn	AD	AD protection power voltage detect +1.2D
	P103/AN3/RTP13		Standby	O	
			MCUSleep	O	
138	AN2	MODEL	PowerOn	AD	AD model discrimination
	P102/AN2/RTP12		Standby	O	
			MCUSleep	O	
139	AN1	DEST	PowerOn	AD	AD destination discrimination
	P101/AN1/RTP11		Standby	O	
			MCUSleep	O	
140	AVss	AVss	All	MCU	
141	P100	iPAP	PowerOn	I	iPod accessory power detect
	P100/AN0/RTP10		Standby	O	
			MCUSleep	O	
142	Vref	VREF	All	MCU	
143	AVcc	AVcc	All	MCU	
144	RXD4	RXDi	PowerOn	SI	Asynchronous data input for iPod
	P97/ADTRG/RXD4/ SCL4/STXD4		Standby	O	
			MCUSleep	O	

■ PIN CONNECTION DIAGRAMS

• ICs

AK4588VQ



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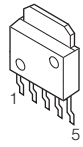

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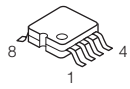

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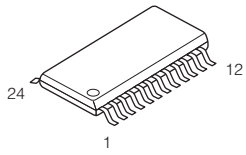

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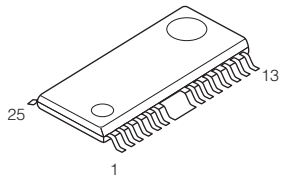

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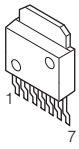

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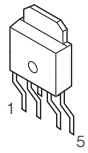

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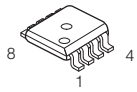

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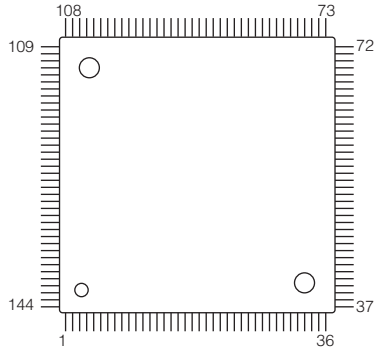

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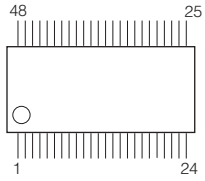

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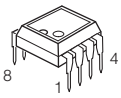

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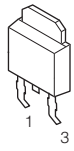
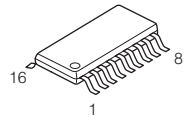


1: INPUT
2: COMMON
3: OUTPUT

LC72725KM-UY-TLM-E
PCM1781DBQR



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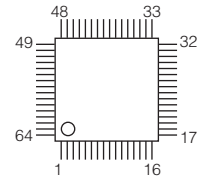

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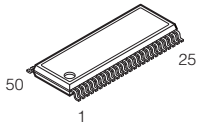

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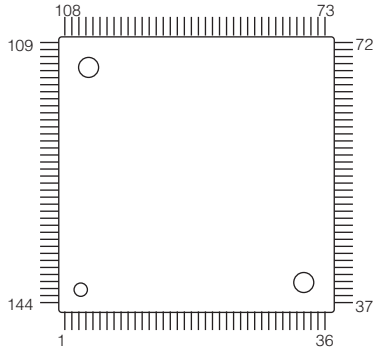

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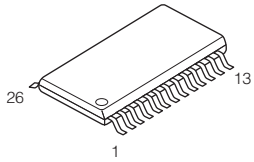

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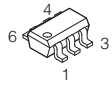

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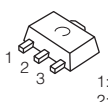
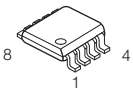
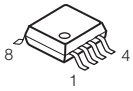


1: REFERENCE
2: ANODE
3: CATHODE

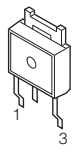
NJM2904M
TC7WHU04FK
TC7WZ04FK



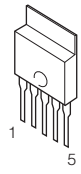
NJM3404AM-TE1



NJM7812DL1A



PQ012FZ01ZP



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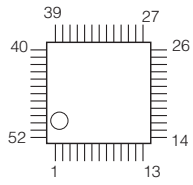

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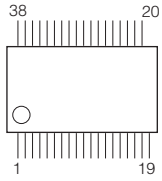

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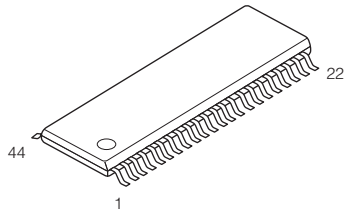

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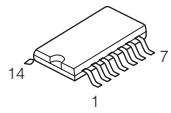
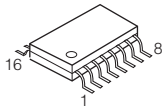
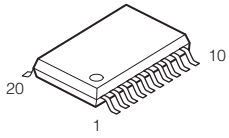


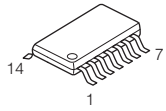
TC74VHC153FT



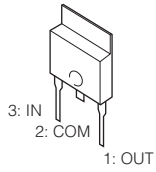
TC74VHC541FT
TC74VHCT541AFT
TC74VHC245FT



TC74VHCU04FT

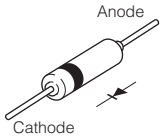


µPC29M33T-E1-AZ

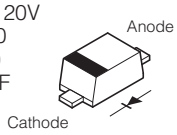


• Diodes

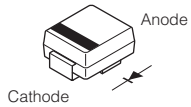
1N4002S
1SR154-400
D3S6M-7002
P6KE200A 200V
MTZJ30D
MTZJ27D



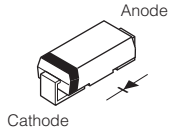
1SS355
MA8051-M 5.1V
MA8062-H 6.4V
MA8068-M 6.8V
MA8100-H 10.3V
MA8200-M 20V
RB160M-30
RB501V-40
HSU119TRF



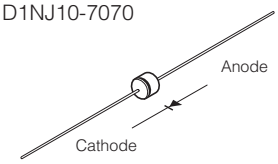
STTH110A
D1FK60-5063



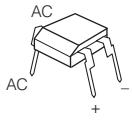
D1FS4A-4063
RB050L-40
RB051L-40



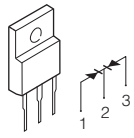
D1NL20U
D1NL40
D1NJ10-7070



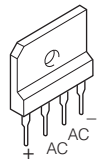
S1NB20 1A 200V



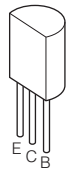
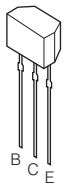
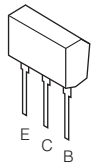
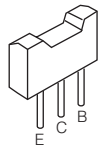
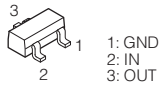
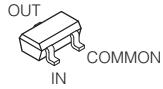
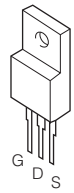
STTH2002CFP



D5SB60 5A 600V



• Transistors

2Y 5181CS 	2SC1740S KTC3199-Y-AT/P 	2SA1826 2SC4730 	2SA2093 2SC4488 	2SA1037K 2SC2412K
2SD2704K KS5783CT 	DTA143EKA DTC114EKA 	KRA102S-RTK/P KRC104S-RTK 	2SK3523-01R 2SK3876-01R 	RSR015P03TL

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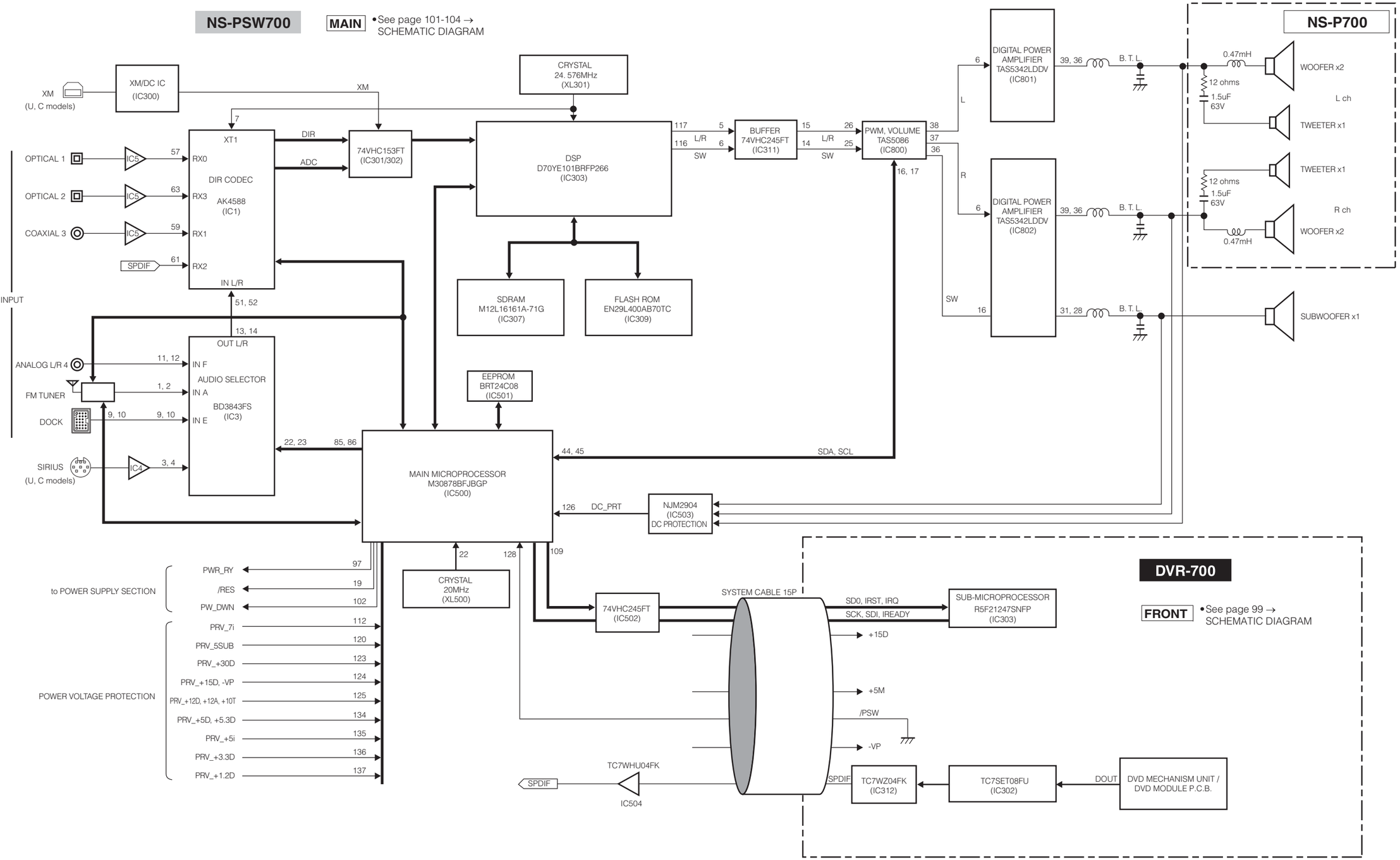
■ BLOCK DIAGRAMS

AUDIO SECTION BLOCK DIAGRAM



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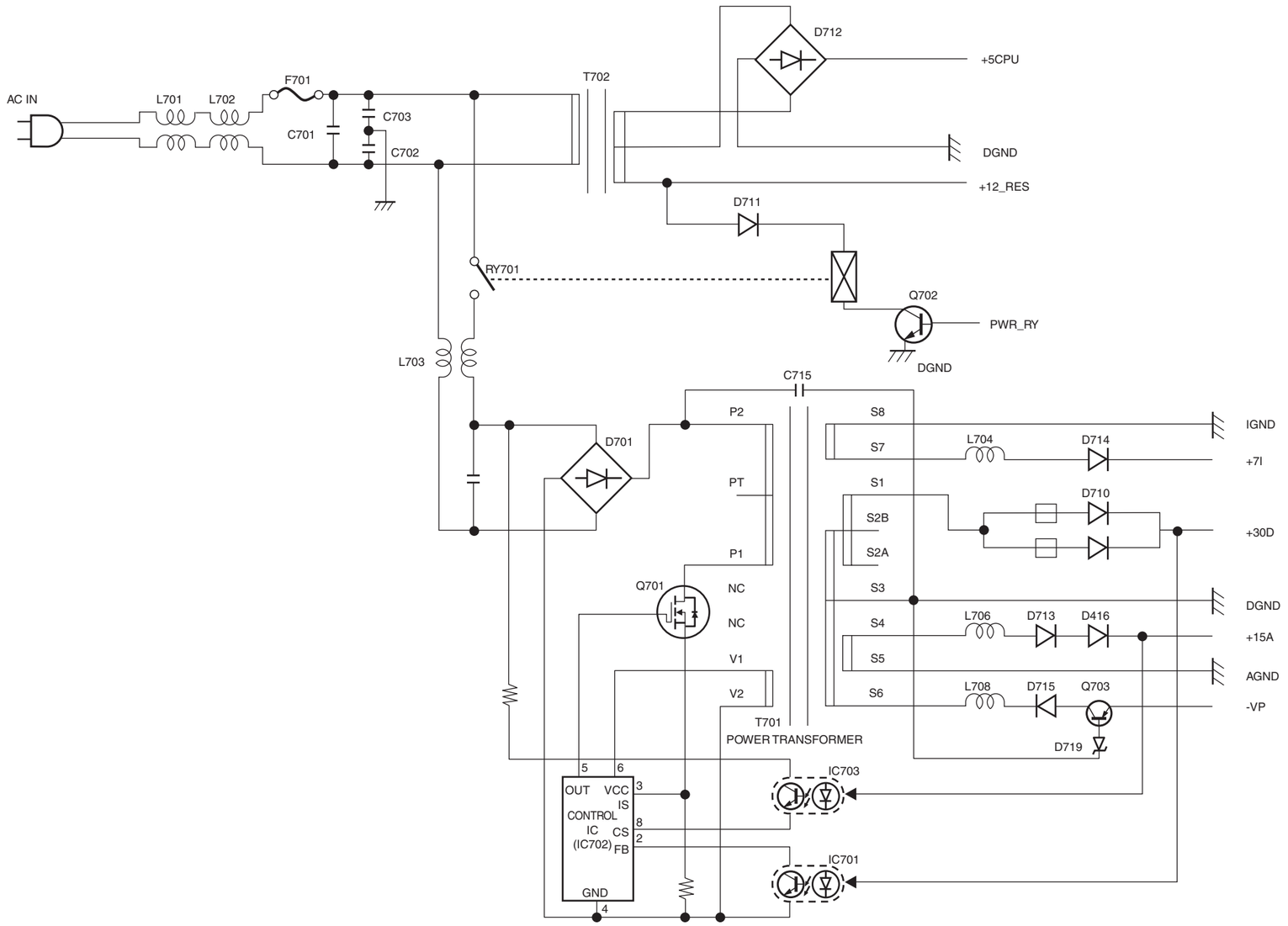
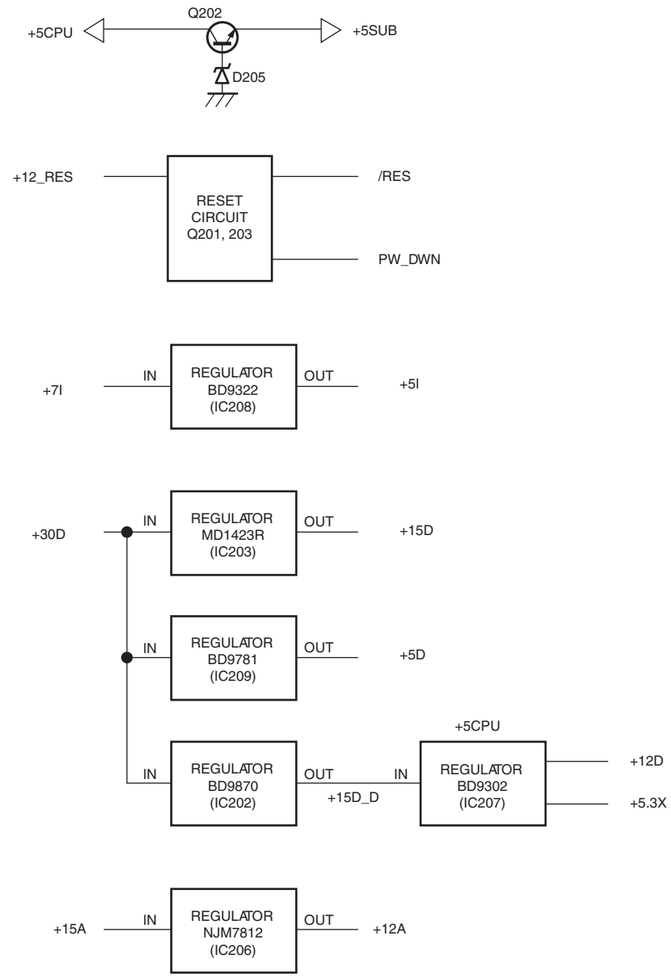
POWER SUPPLY SECTION BLOCK DIAGRAM

POWER •See page 106 → SCHEMATIC DIAGRAM



SUB •See page 105 → SCHEMATIC DIAGRAM



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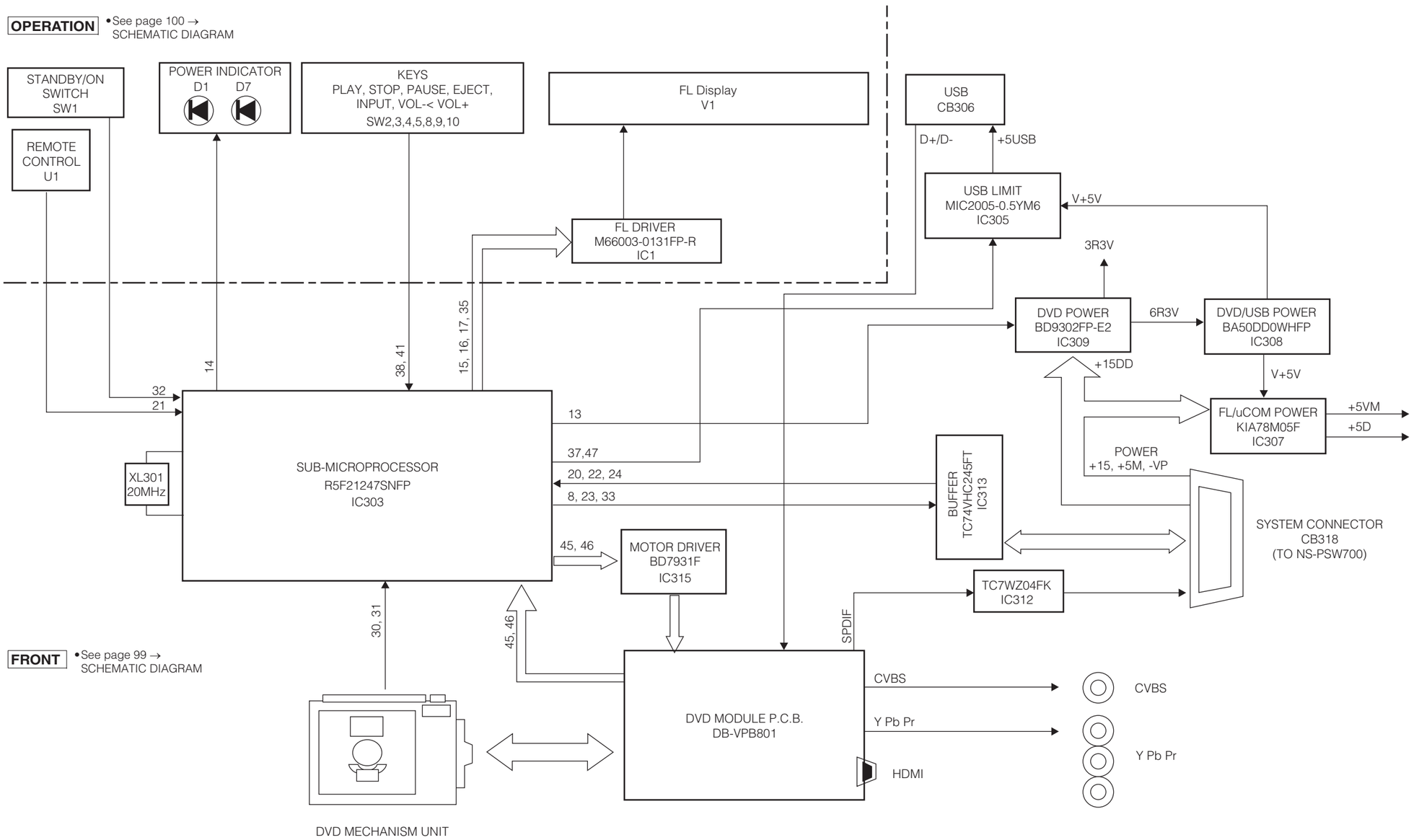
DVR-700 SECTION BLOCK DIAGRAM



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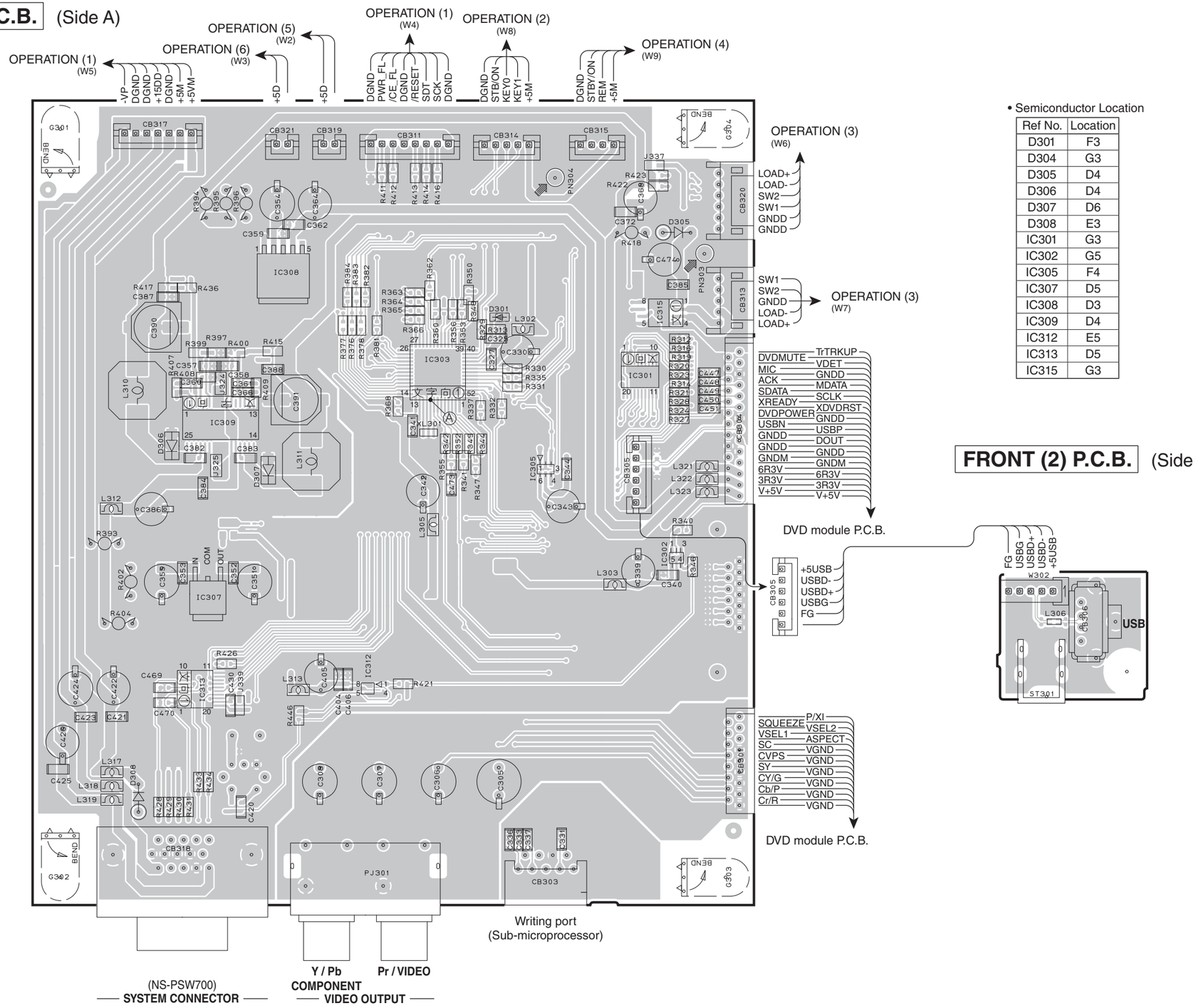
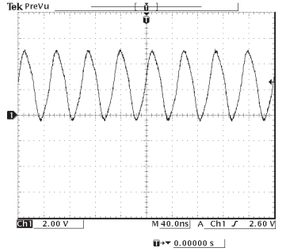
■ PRINTED CIRCUIT BOARDS

FRONT (1) P.C.B. (Side A)



POINT Ⓐ XL301 (Pin 9 of IC303)



• Semiconductor Location

Ref No.	Location
D301	F3
D304	G3
D305	D4
D306	D4
D307	D6
D308	E3
IC301	G3
IC302	G5
IC305	F4
IC307	D5
IC308	D3
IC309	D4
IC312	E5
IC313	D5
IC315	G3

FRONT (2) P.C.B. (Side A)

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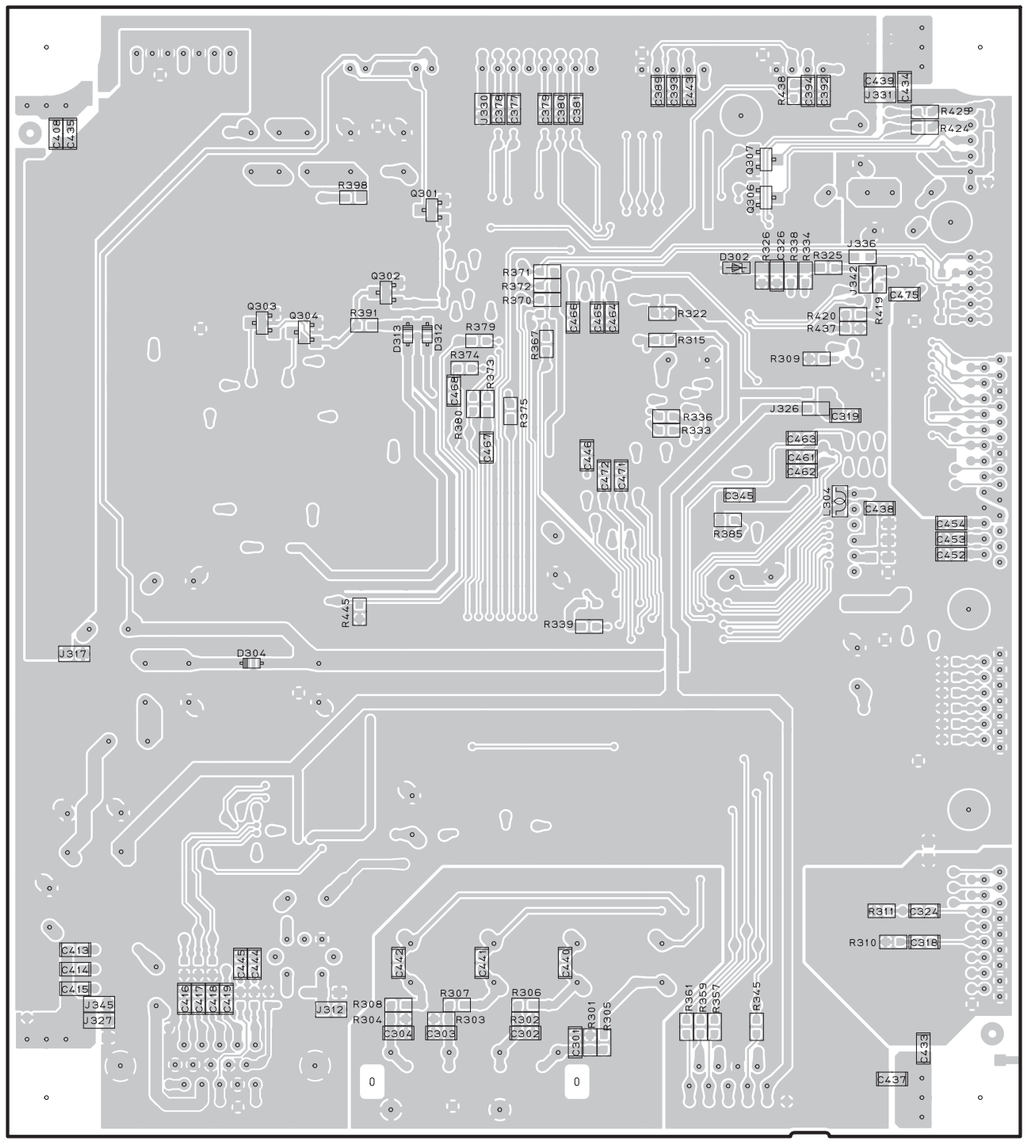
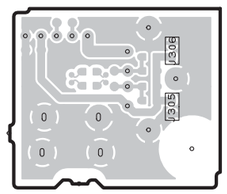
FRONT (1) P.C.B. (Side B)



• Semiconductor Location

Ref No.	Location
D302	F3
D304	D5
IC303	E3
D312	E3
Q301	E3
Q302	D3
Q303	D3
Q304	D3
Q306	F3
Q307	F2

FRONT (2) P.C.B. (Side A)



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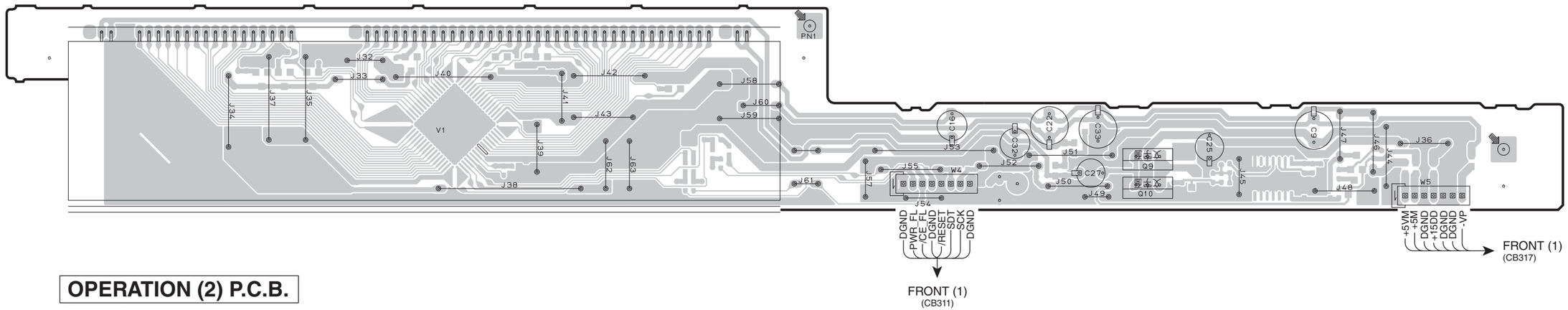
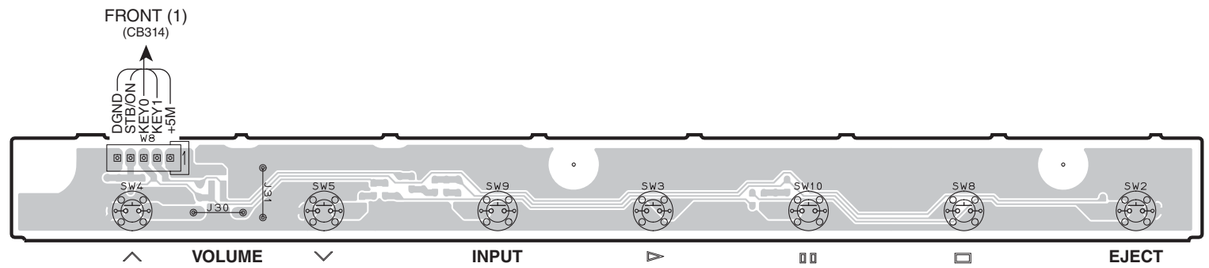
OPERATION (1) P.C.B.

(Side A)



OPERATION (2) P.C.B.

(Side A)

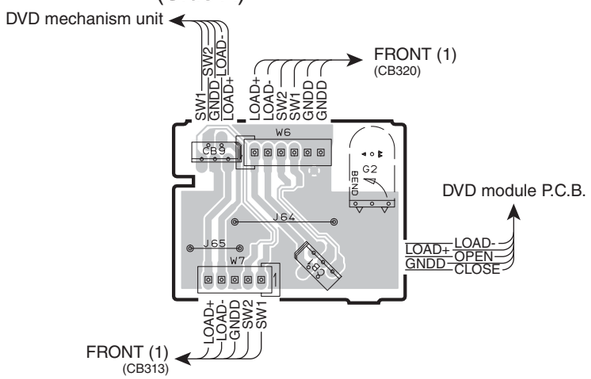


• Semiconductor Location

Ref No.	Location
D1	G6
D7	I6
Q9	H3
Q10	H3

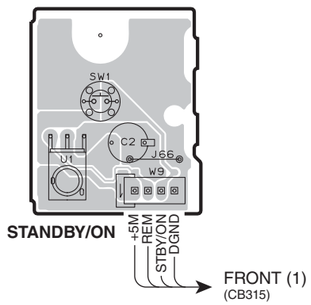
OPERATION (3) P.C.B.

(Side A)



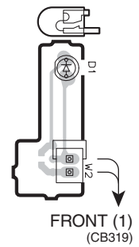
OPERATION (4) P.C.B.

(Side A)



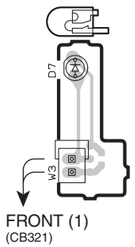
OPERATION (5) P.C.B.

(Side A)



OPERATION (6) P.C.B.

(Side A)



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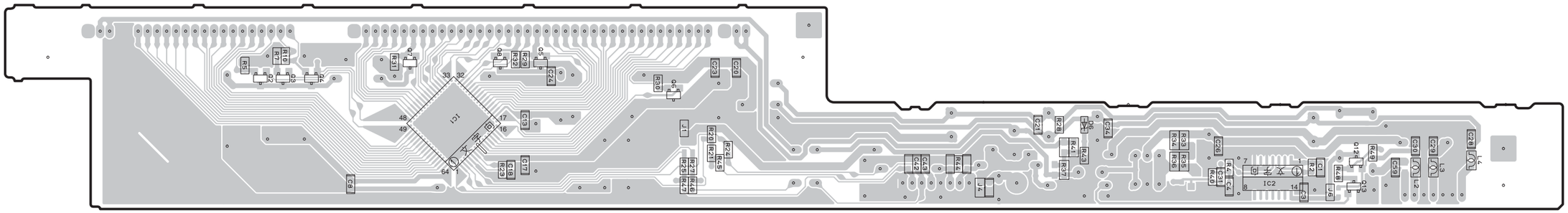
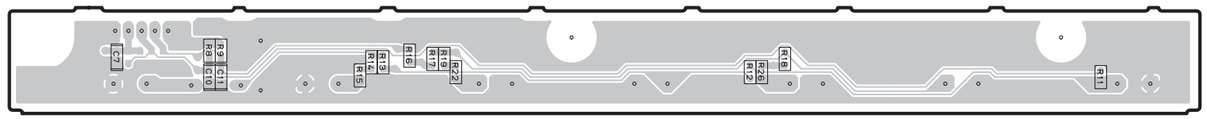
OPERATION (1) P.C.B.

(Side B)



OPERATION (2) P.C.B.

(Side B)

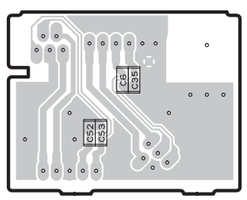


• Semiconductor Location

Ref No.	Location
D6	G3
IC1	D3
IC2	H3
Q2	B2
Q3	C2
Q4	C2
Q5	D2
Q6	E2
Q7	C2
Q8	D2
Q12	I3
Q13	I3

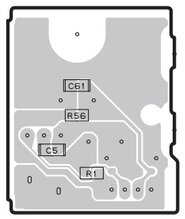
OPERATION (3) P.C.B.

(Side B)



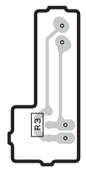
OPERATION (4) P.C.B.

(Side B)



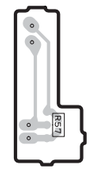
OPERATION (5) P.C.B.

(Side B)



OPERATION (6) P.C.B.

(Side B)



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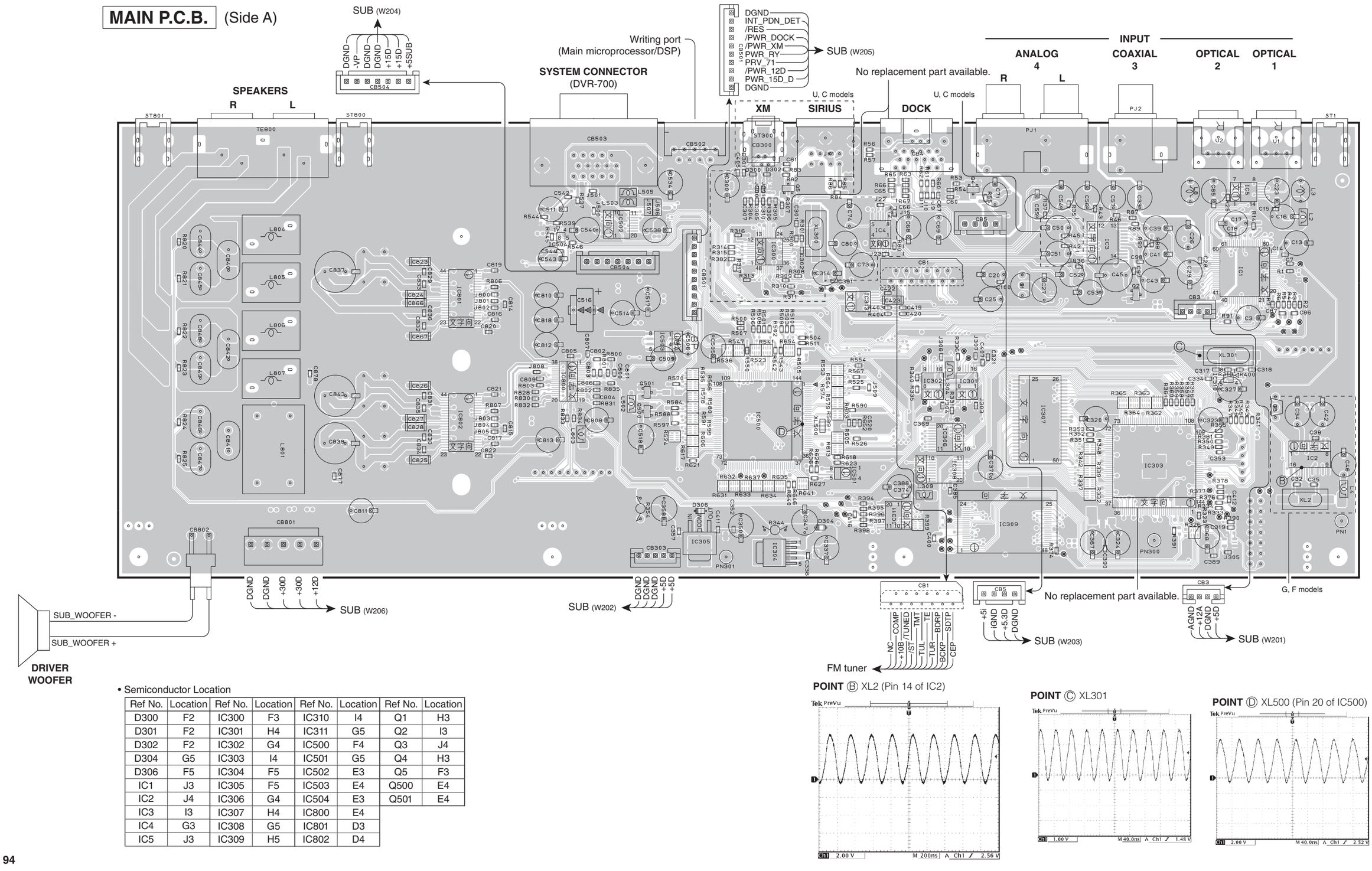
MAIN P.C.B. (Side A)



- Semiconductor Location

Ref No.	Location	Ref No.	Location	Ref No.	Location	Ref No.	Location
D300	F2	IC300	F3	IC310	I4	Q1	H3
D301	F2	IC301	H4	IC311	G5	Q2	I3
D302	F2	IC302	G4	IC500	F4	Q3	J4
D304	G5	IC303	I4	IC501	G5	Q4	H3
D306	F5	IC304	F5	IC502	E3	Q5	F3
IC1	J3	IC305	F5	IC503	E4	Q500	E4
IC2	J4	IC306	G4	IC504	E3	Q501	E4
IC3	I3	IC307	H4	IC800	E4		
IC4	G3	IC308	G5	IC801	D3		
IC5	J3	IC309	H5	IC802	D4		

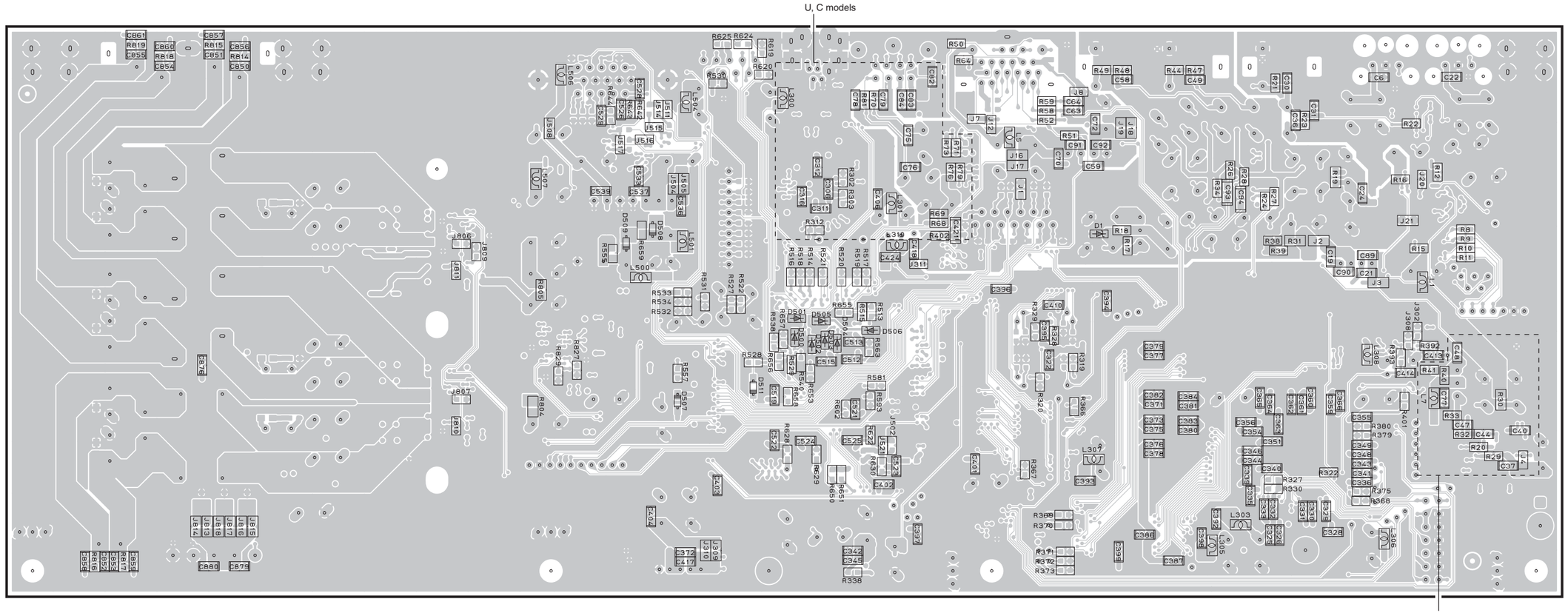
POINT Ⓑ XL2 (Pin 14 of IC2)

POINT Ⓒ XL301

POINT Ⓓ XL500 (Pin 20 of IC500)

NS-PSW700

MAIN P.C.B. (Side B)

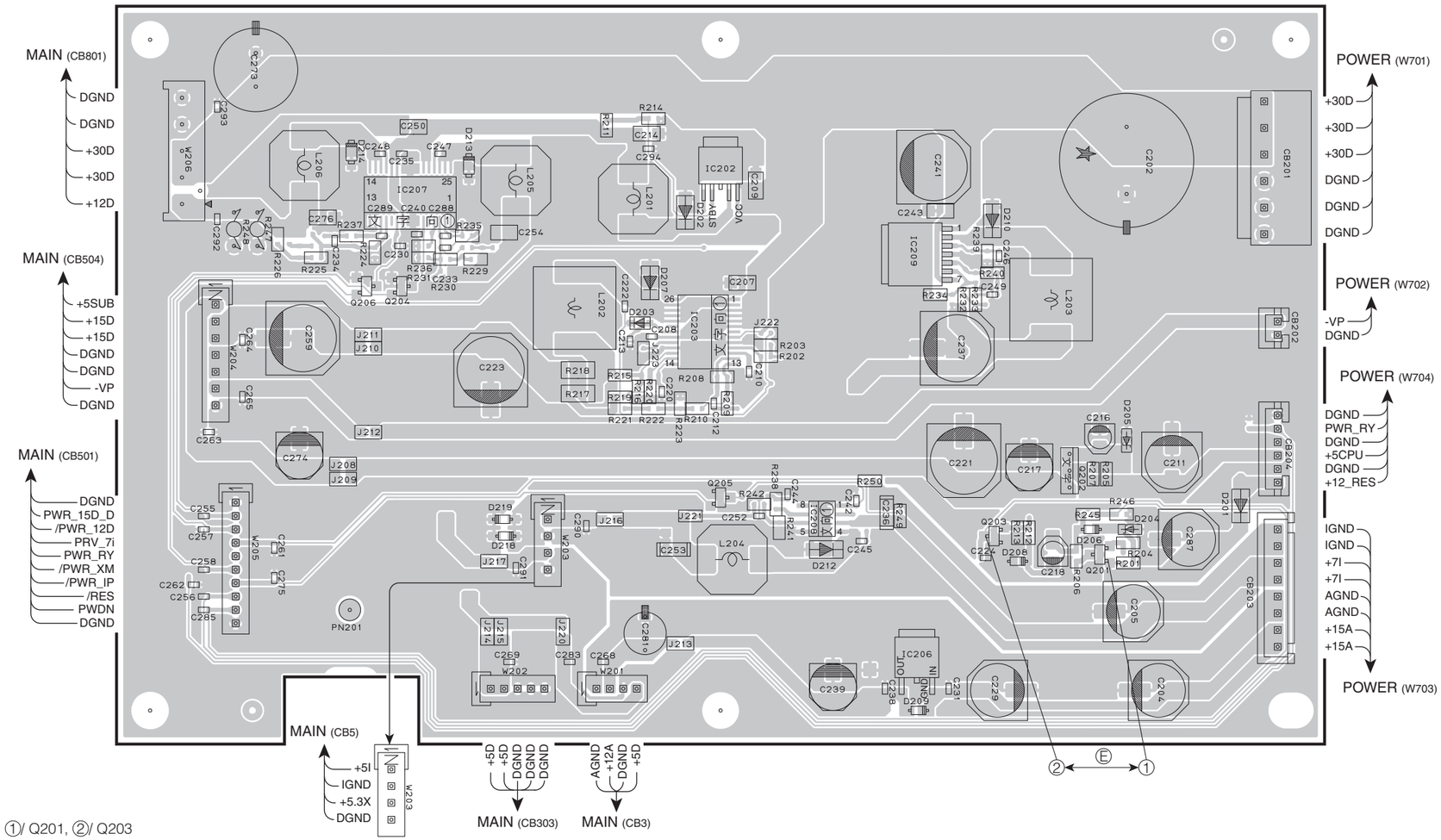


• Semiconductor Location

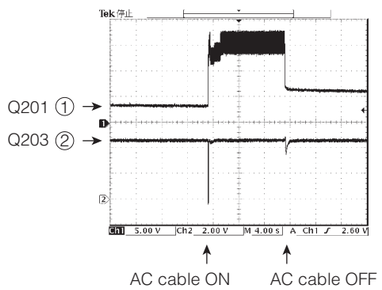
Ref No.	Location	Ref No.	Location
D1	H3	D509	E3
D500	F4	D511	F4
D501	F4		
D502	F4		
D503	F4		
D504	F4		
D505	F4		
D506	F4		
D507	E4		
D508	E3		

NS-PSW700

SUB P.C.B. (Side A)



POINT Ⓔ ①/ Q201, ②/ Q203

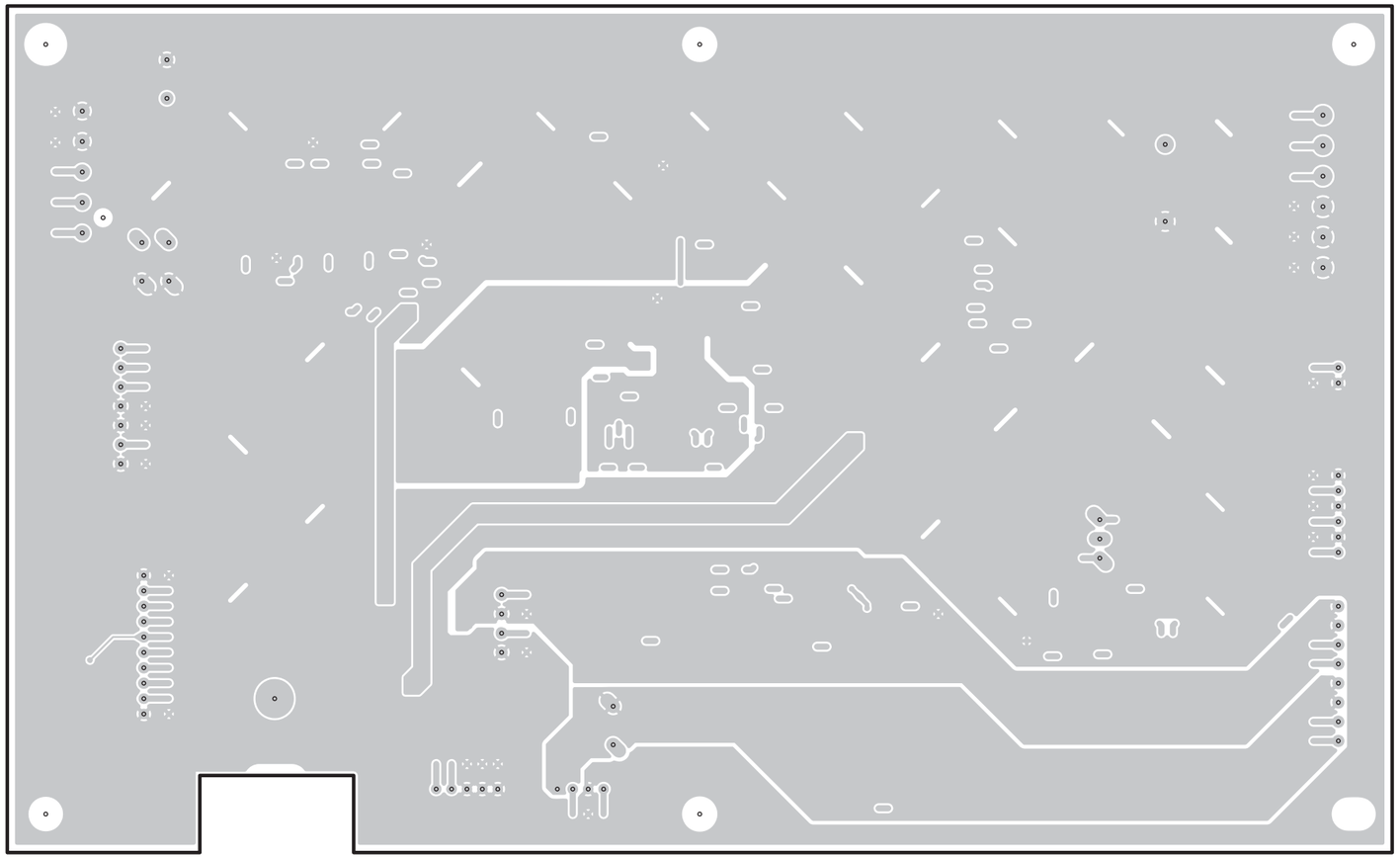


• Semiconductor Location

Ref No.	Location
D201	H4
D202	E3
D203	E3
D204	H4
D205	H4
D206	G4
D207	E3
D208	G4
D209	G5
D210	G3
D212	F4
D213	D3
D214	D2
D218	E4
D219	E4
IC202	F3
IC203	E3
IC206	G5
IC207	D3
IC208	F4
IC209	G3
Q201	G4
Q202	G4
Q203	G4
Q204	D3
Q205	F4
Q206	D3

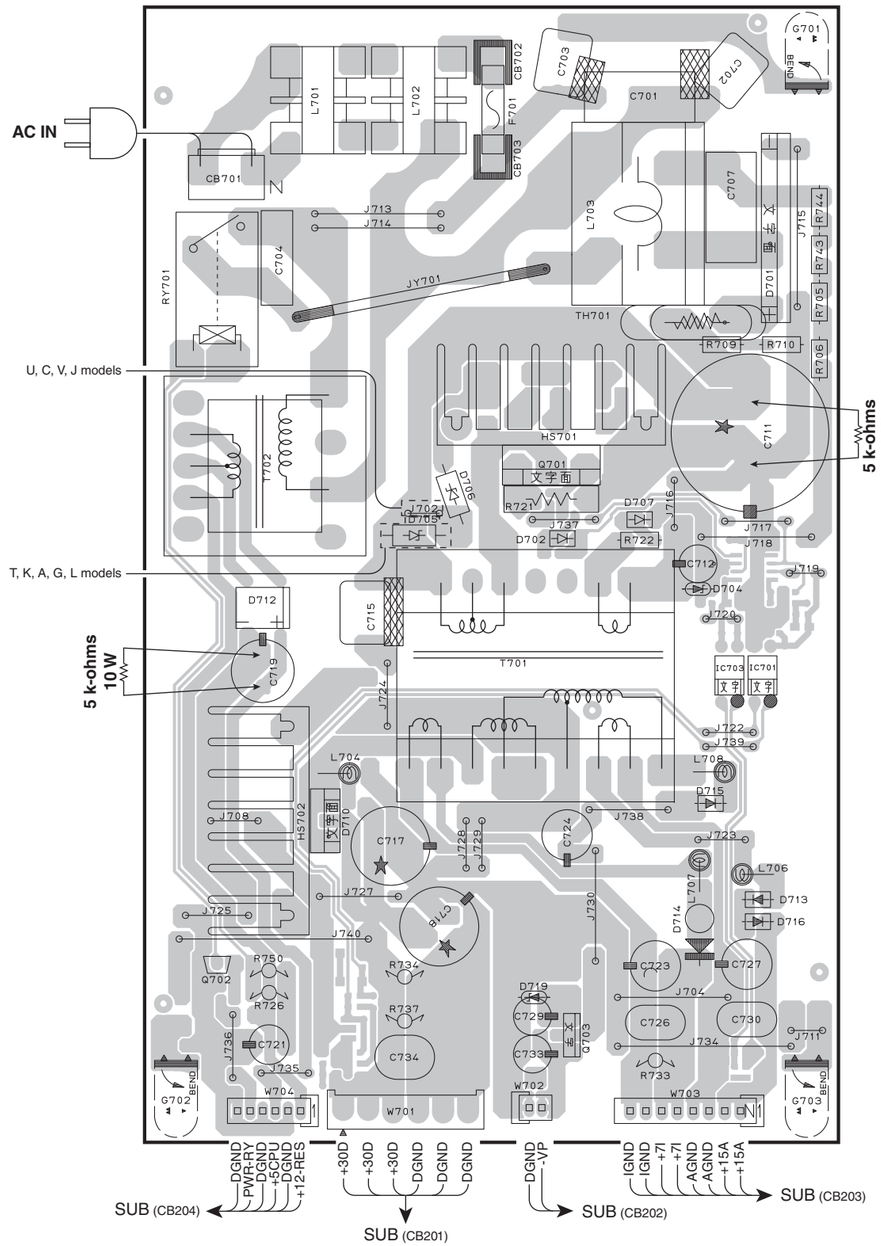
NS-PSW700

SUB P.C.B. (Side B)

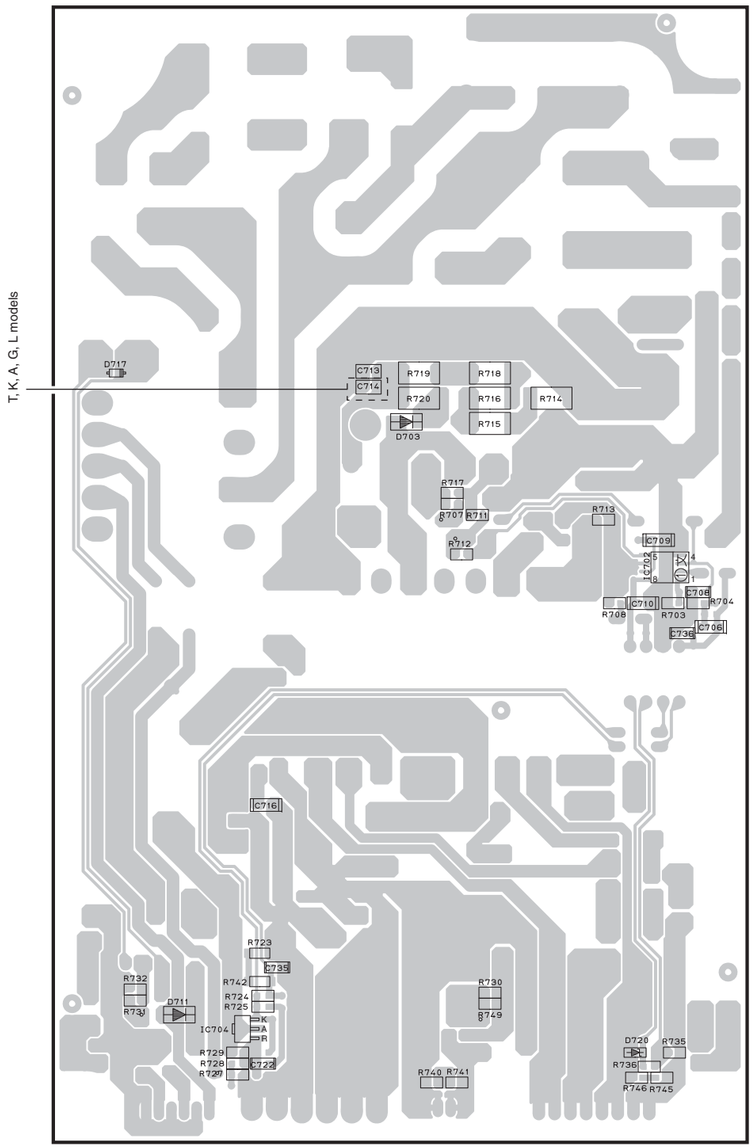


NS-PSW700

POWER P.C.B. (Side A)



POWER P.C.B. (Side B)



• Semiconductor Location

Ref No.	Location
D701	D3
D702	D4
D703	G4
D704	D4
D705	C4
D706	C4
D707	D4
D710	C5
D711	F6
D712	B4
D713	D6
D714	D6
D715	D5
D716	D6
D717	F3
D719	C6
D720	H6
IC701	D5
IC702	I4
IC703	D5
IC704	G6
Q701	D4
Q702	B6
Q703	D6

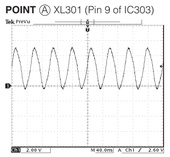
Safety measures

- Some internal parts in this product contain high voltages and are dangerous. Be sure to take safety measures during servicing, such as wearing insulating gloves.
- Note that positions indicated below are dangerous even after the power is turned off because an electric charge remains and a high voltage continues to exist there. Before starting any repair work, perform discharge by connecting a discharge resistor (5k-ohms/10W) between terminals at following positions. The time required for discharging is about 30 seconds.
  1. C711 on POWER P.C.B..
  2. C719 on POWER P.C.B..

■ SCHEMATIC DIAGRAMS
FRONT

DVR-700

POINT Ⓐ XL301 (Pin 9 of IC303)



Writing port
(Sub-microprocessor)
to SUB u-COM WRITER

Page 100 K2 to OPERATION (1)_W4
Page 100 B6 to OPERATION (2)_W8
Page 100 C9 to OPERATION (4)_W9
Page 100 M3 to OPERATION (6)_W3
Page 100 L3 to OPERATION (5)_W2

[LED POWER]

[uCOM 20MHz]

[LEVEL SHIFT]

SUB-MICROPROCESSOR

[DVD MODULE]

DVD/USB IN

[DVD POWER]

[FL&uCOM POWER]

[DVD/USB POWER]

[S/PDIF]

SYSTEM CONNECTOR
(NS-PSW700)

to SUBWOOFER Unit

Page 100 J2 to OPERATION (1)_W5
Page 100 E10 to OPERATION (3)_W6
Page 100 F10 to OPERATION (3)_W7

[DVD Module]

[MOTOR DRIVER]

[SLOT LOADER]

[Video]

USB IN

FRONT (2)

From/To MODULE CN967 (Video) to DVD module P.C.B.
From/To MODULE CN962(AUDIO) to DVD module P.C.B.
From/To MODULE CN968 (STSTEM) to DVD module P.C.B.
to USB (W302)
to FRONT (CB305)

FRONT(1)
301 - 600

FRONT (1)

Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
k1	0302-304-306-307	KRC1045-RTK/P DTC144EKA
k2	0301	KRC1025-RTK/P DTC114EKA
k3	0304-312-313	1SS355 MAZU1100L

NOTICE (model)
(J)····· JAPAN
(U)····· U.S.A
(C)····· CANADA
(R)····· GENERAL
(T)····· CHINA
(K)····· KOREA
(A)····· AUSTRALIA
(B)····· BRITISH
(E)····· EUROPE
(L)····· SINGAPORE
(E)····· SOUTH EUROPE
(V)····· TAIWAN
(F)····· RUSSIAN

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
✓	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
◪	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	⫴
⊘	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	⫴
◉	CERAMIC TUBULAR CAPACITOR	
◎	POLYESTER FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	
ⓘ	MICA CAPACITOR	
⊙	POLYPROPYLENE FILM CAPACITOR	
●	SEMICONDUCTIVE CERAMIC CAPACITOR	

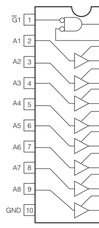
Detection for AD port: KEY0 (39 pin of sub-microprocessor IC303 of OPERATION P.C.B.)
Key Input (A-D) Pull-Up Resistance 10 k-ohms

Ohm	+ 680	+ 680	+ 15k	+ 13.5k
V	0.3 - 0.5	0.5 - 0.8	3.0 - 3.3	3.6 - 3.9
A/D value	15 - 25	26 - 40	155 - 170	185 - 200
KEY0 (39 pin)	EJECT	PLAY	VOLUME UP	VOLUME DOWN

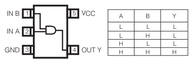
Detection for AD port: KEY1 (41 pin of sub-microprocessor IC303 of OPERATION P.C.B.)
Key Input (A-D) Pull-Up Resistance 10 k-ohms

Ohm	+ 1.2k	+ 1.2k	+ 12.7k	+ 8.0k
V	0.4 - 0.7	0.8 - 1.1	2.8 - 3.2	3.3 - 3.7
A/D value	20 - 36	40 - 56	142 - 163	168 - 189
KEY1 (41 pin)	-	STOP	INPUT	PAUSE

IC301: TC74VHCT541AFT
Octal bus buffer

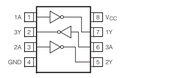


IC302: TC7SET08FU
2 input AND gate

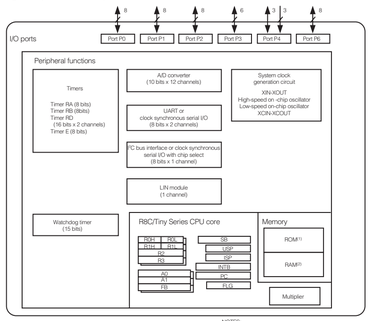


A	B	Y
L	L	L
L	H	L
H	L	L
H	H	H

IC312: TC7WZ04FK
Triple inverter

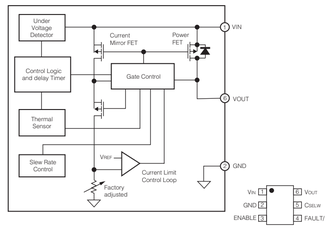


IC303: R5F21247SNFP
Single chip 16 bit microprocessor

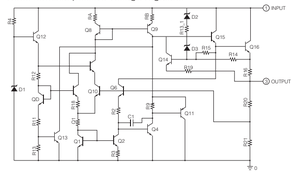


NOTES:
1. ROM size varies with MCU type.
2. RAM size varies with MCU type.

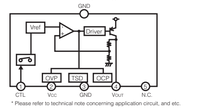
IC305: MIC2005-0.5YM6
Fixed current limit power distribution switch



IC307: KIA78M05F
Three terminal positive voltage regulator

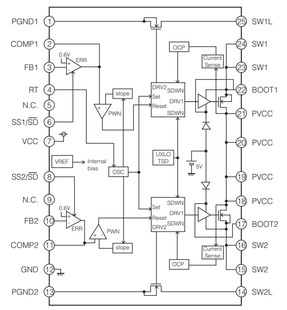


IC308: BA50DD0WHFP
2 A low dropout voltage regulator with shut down switch

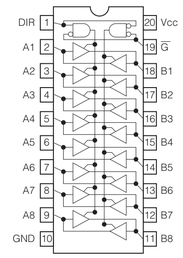


* Please refer to technical note concerning application circuit, and etc.

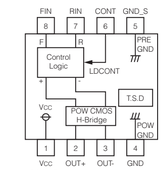
IC309: BD9302FP-E2
2.5 MHz 2 A power switch 2 ch step-down switching regulator



IC313: TC74VHC245FT
Octal bus transceiver

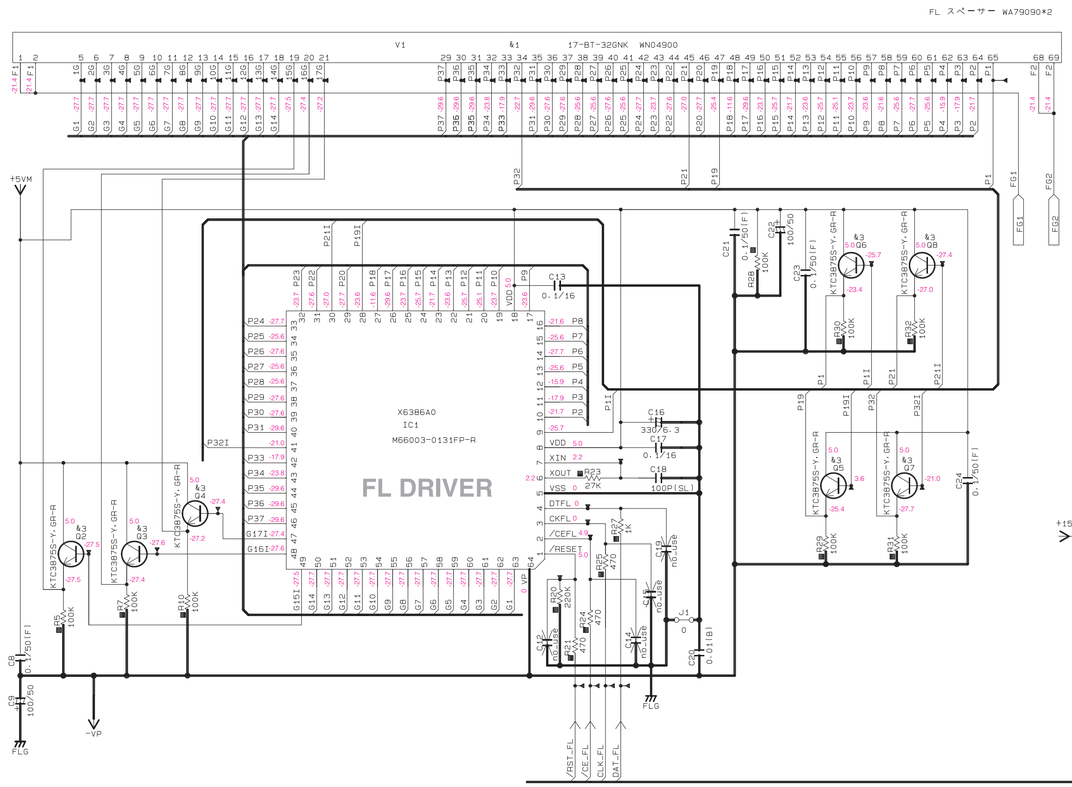


IC315: BD7931F
Power driver IC

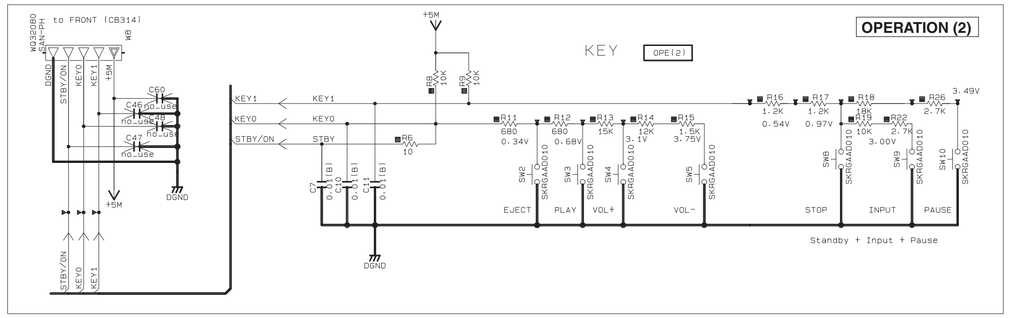


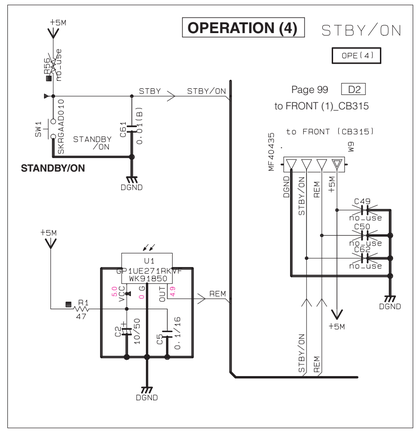
★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ! and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

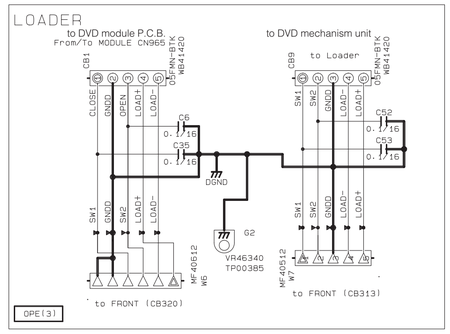
OPERATION



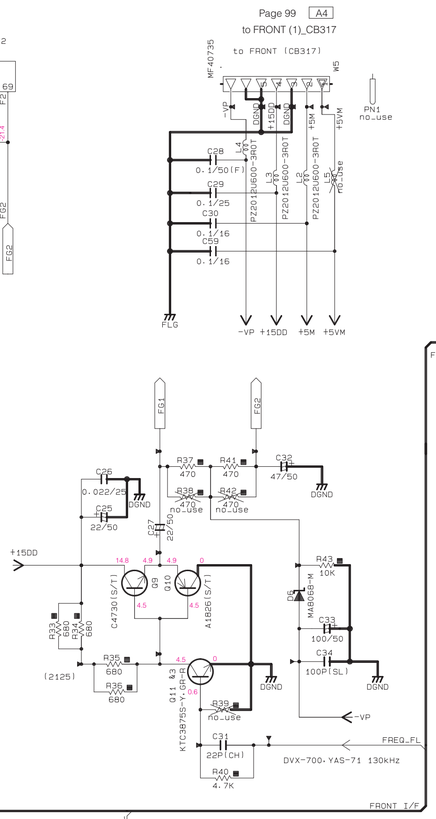
Page 99 C2
to FRONT (1)_CB314

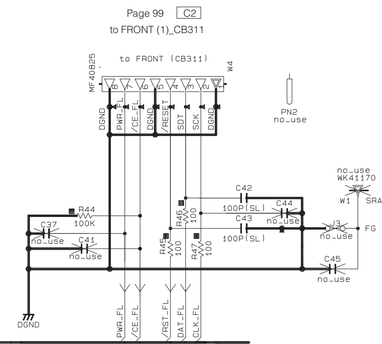


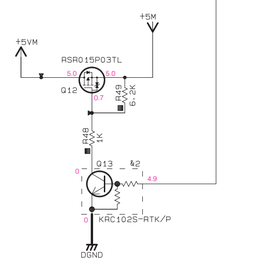




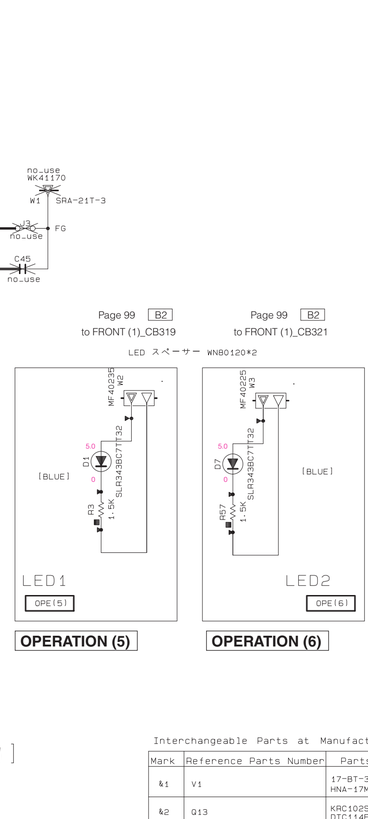
OPERATION (3) Page 99 I5 to FRONT (1)_CB320 — Page 99 J8 to FRONT (1)_CB313



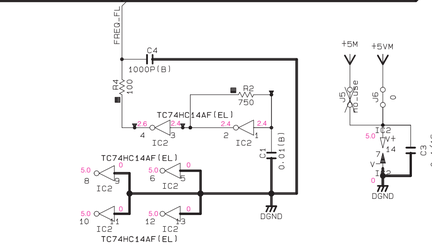




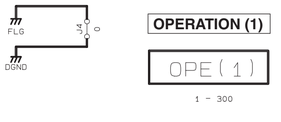
[FL POWER SW]



OPERATION (5) **OPERATION (6)**



[FREQ FL]



OPERATION (1)

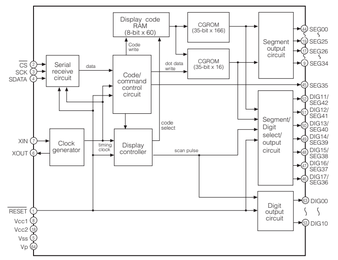
Detection for AD port: KEY0 (39 pin of sub-microprocessor IC303 of OPERATION P.C.B.)
KEY1 (41 pin of sub-microprocessor IC303 of OPERATION P.C.B.)

Key Input(A-D) Pull-Up Resistance 10 k-Ohms

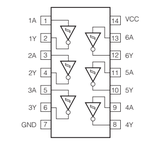
Ohm	0	+ 680	+ 680	+ 15k	+ 13.5k
V	0 – 0.2	0.2 – 0.4	0.5 – 1.8	1.9 – 3.4	3.5 – 4.0
A/D value	0 – 8	10 – 20	24 – 94	95 – 175	176 – 206
KEY0 (39 pin)	—	EJECT	PLAY	VOLUME UP	VOLUME DOWN

Ohm	0	+ 1.2k	+ 1.2k	+ 12.7k	+ 5.3k	+ 2.7k
V	0 – 0.1	0.3 – 0.7	0.8 – 1.7	1.8 – 2.7	2.8 – 3.2	3.3 – 3.6
A/D value	0 – 14	15 – 38	39 – 89	90 – 141	142 – 166	167 – 184
KEY1 (41 pin)	—	—	STOP	INPUT	—	PAUSE

IC1: M66003-0131FP-R
18 digit 5 x 7 segment VFD controller/driver



IC2: TC74HC14AF
Hex schmitt inverter



Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
&1	V1	17-BT-32GNK HNA-17MM06T
&2	Q13	KRC102S-RTK/P DTC114EKA
&3	Q2-8, 11	KTC3875S-Y,GR-RTK/P (2412K[B/R/S] 2SD2601KR/KQ[B/R/S]

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
⊘	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
⚠	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
◪	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	⊟
⊗	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	⊥⊥
◉	CERAMIC TUBULAR CAPACITOR	
◎	POLYESTER FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	
Ⓜ	MICA CAPACITOR	
Ⓟ	POLYPROPYLENE FILM CAPACITOR	
◉	SEMICONDUCTIVE CERAMIC CAPACITOR	

NOTICE (model)
(J)····· JAPAN
(U)····· U.S.A
(C)····· CANADA
(R)····· GENERAL
(T)····· CHINA
(K)····· KOREA
(A)····· AUSTRALIA
(B)····· BRITISH
(G)····· EUROPE
(L)····· SINGAPORE
(E)····· SOUTH EUROPE
(V)····· TAIWAN
(F)····· RUSSIAN

★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ! and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

MAIN 1/4

NS-PSW700

INPUT

OPTICAL 1 [OPT_IN1] | OPTICAL 2 [OPT_IN2] | COAXIAL 3 [COAX_IN] | ANALOG 4 [ANALOG_IN]

No replacement part available.

DOCK [iPod Dock]

SIRIUS (U, C models) [SIRIUS RADIO]

DVD/USB IN

DIGITAL IN

ANALOG IN

MIX IN

AUDIO SELECTOR

DIR CODEC

AK4588VQ

IC1

[DIR & CODEC]

[AUDIO SELECTOR]

[TUNER]

[RDS] (G, F models)

YAS-71 : no.use
DVX-700: use UC dest. only

YAS-71 : G dest. only
DVX-700: G dest. only

From/To 003.sht(CPU) to MAIN 3/4

From/To 002.sht(DSP) to MAIN 2/4

From PCB SUB (#24 wire) Page 105 K2 to SUB_W201

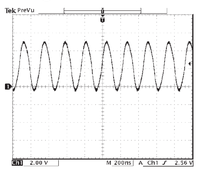
From PCB SUB (#22 wire) Page 105 K3 to SUB_W203

to FM TUNER Pack

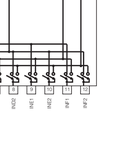
Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
k1		
k2	Q3	2SC1740S[R/S] 2SC3311ARA[Q/R/S]
k3	Q1	2SC1815[Y] KTC3198Y-AT
k4	Q500	2SA1037AK[Q/R/S] KTA1504S-Y,GR-RTK/P
k5	Q4	2SC2412K[Q/R/S] 2SD601AR/AQ[P/Q/S] KTC3875S-Y,GR-RTK/P
k6	Q2	2SD2704[K] 2SC3326[A/B] 2SD1938[F]S/T 2SC5938A[A/B]
k7	Q501	DTC144EKA KRC104S-RTK/P

POINT Ⓑ XL2 (Pin 14 of IC2)

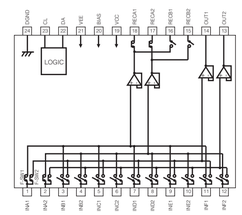


IC5: TC74VHCU04FT
Hex inverters

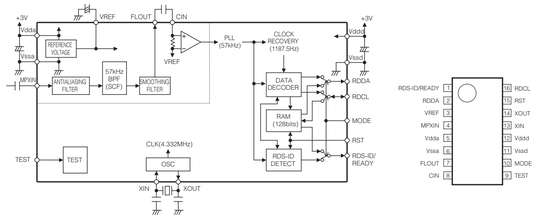


IC1: AK4588VQ
2/8-channel audio CODEC with DIR

IC3: BD3843FS-E2
6-channel function switch



IC2: LC72725KM-UY-TLM-E
RDS signal demodulation IC



★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

MAIN 2/4

[XM Radio]

[Clock Selector]

[Power Circuit for DSP]

[Level Shifter]

[DSP]

[Buffer]

DSP

SDRAM

FLASH ROM

No replacement part available.

(U.C models)

No replacement part available.

No replacement part available.

From PCB SUB (#24 wire)

Page 105 K3

to SUB_W202

to MAIN 1/4

From/To 001.sht(INPUT)

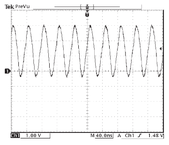
From/To 003.sht(CPU)

to MAIN 3/4

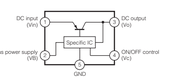
To 004.sht(D-AMP)

to MAIN 4/4

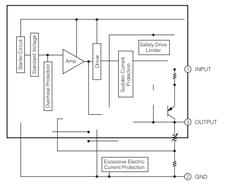
POINT Ⓒ XL301



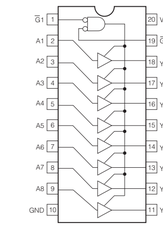
IC304: PQ012FZ01ZP
Voltage regulator



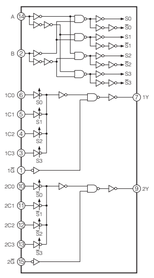
IC305: µPC29M33T-E1-AZ
Voltage regulator



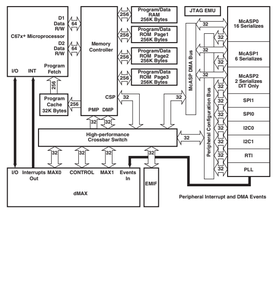
IC306: TC74VHCT541AFT
Octal bus buffer



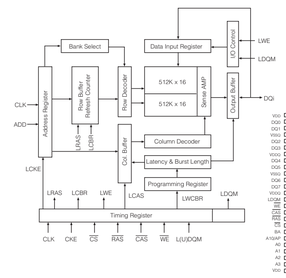
IC301, 302: TC74VHC153FT
Dual 4-channel multiplexer



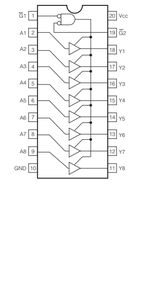
IC303: D70YE101BRFP266
Floating-point digital signal processors



IC307: M12L16161A-7TG
512 K x 16-bit x 2 banks synchronous DRAM



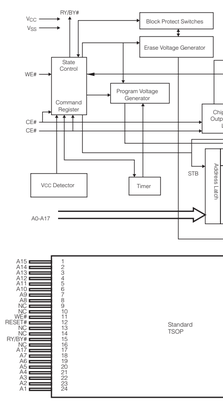
IC308: TC74VHCT541AFT
Octal bus buffer



IC310: TC7WZ04FK
Triple inverter

IC311: TC74VHC245FT
Octal bus transceiver

IC309: EN29LV400AB-70TCP
Flash memory boot sector flash memory, CMOS 3.0 V



IC313: PCM1781DBQR
Audio digital-to-analog converter

(1) Open-drain output for the PCM1792
NOTE: Signal names in parentheses ( ) are for the PCM1781.

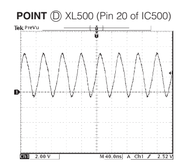
- ★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
- ★ Components having special characteristics are marked ! and must be replaced with parts having specifications equal to those originally installed.
- ★ Schematic diagram is subject to change without notice.

MAIN 3/4

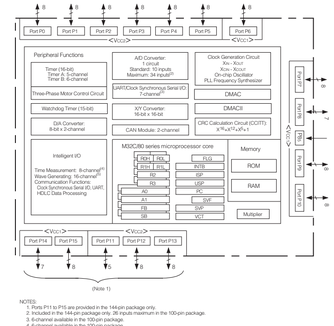
	YAS-71	DVX-700
J513	use	no-use
J515	no.use	use
J512	use	no-use
J514	no.use	use
J510	use	no-use
J516	no-use	use
J517	no-use	use
J518	use	no-use
J519	use	no-use

	YAS-71	DVX-700
R515	15k	56k
	R035715	R035756

POINT Ⓓ XL500 (Pin 20 of IC500)

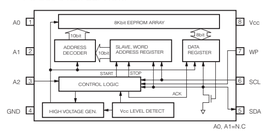


IC500: M30878JBGP
Single chip 16/32-bit microprocessor

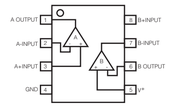


NOTES:
1. Ports P11 to P15 are provided in the 144-pin package only.
2. 16-bit bus is available in the 100-pin package. Inputs maximum in the 100-pin package.
3. 8-channel available in the 100-pin package.
4. 6-channel available in the 100-pin package.
5. 10-channel available in the 100-pin package.

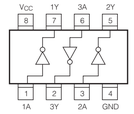
IC501: BR24L08FVM-WTR
I²C bus 8 kbit EEPROM



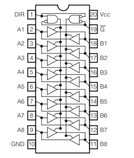
IC503: NJM2904M
Single supply dual operational amplifier



IC504: TC7WHU04FK
Triple inverter

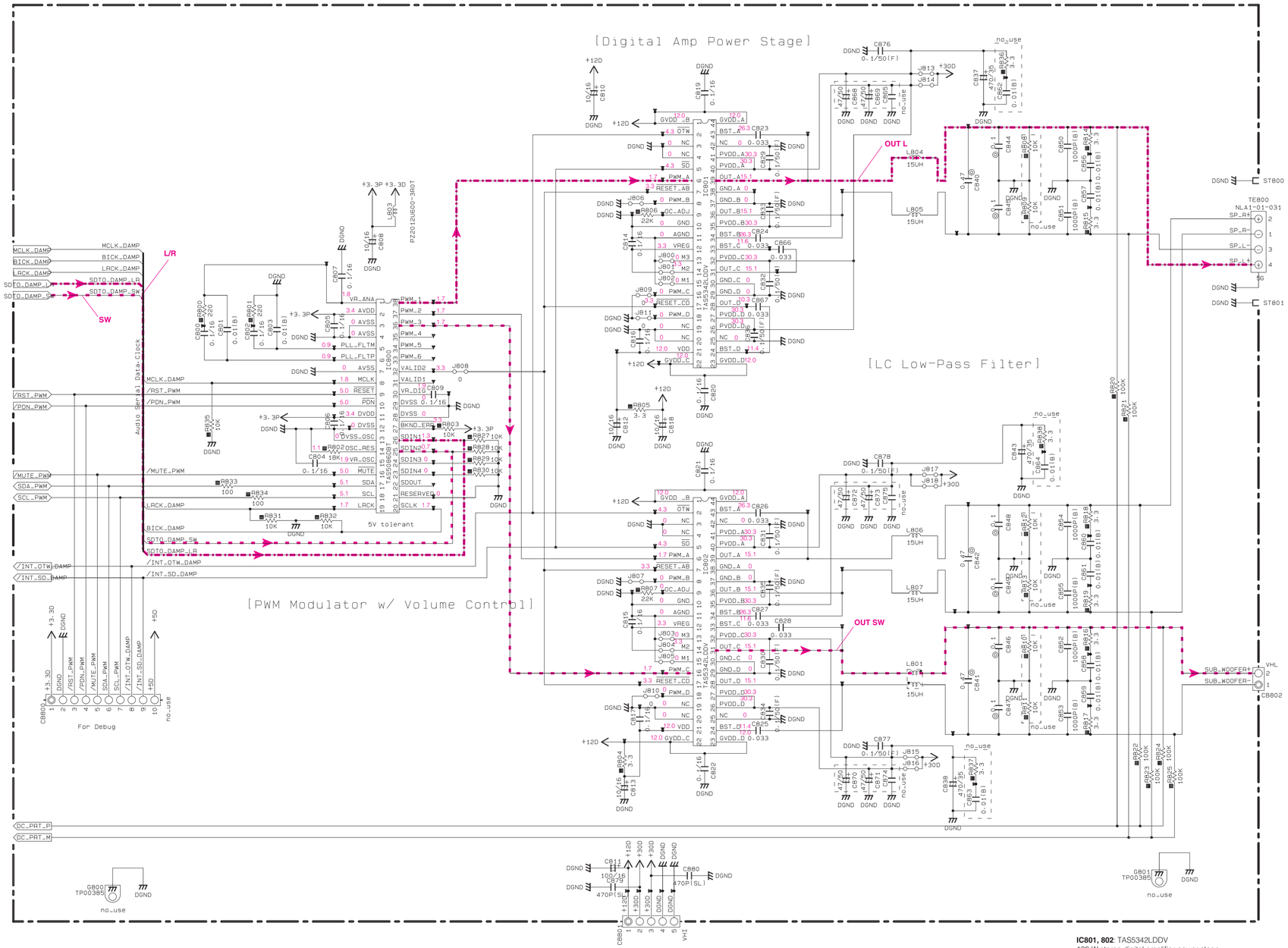


IC502: TC74VHC245FT
Octal bus transceiver

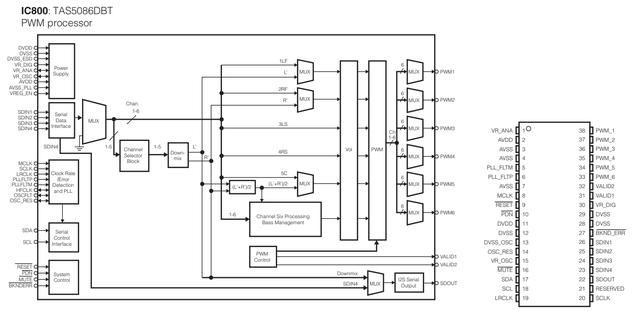


★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ! and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

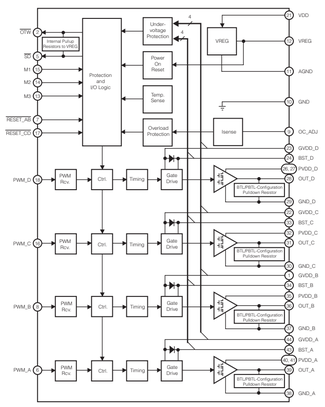
MAIN 4/4



IC800: TAS5086DBT
PWM processor



IC801, 802: TAS5342LDDV
100 W stereo digital amplifier power stage



★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ! and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

Destination Part List

sXX	LOC	UC	ALV	GF
s1	J4	X	X	RD35000 0
s2	R20	X	X	RD35510 100
s3	R29	X	X	RD35710 10K
s4	R30	X	X	RD25410 10
s5	R32	X	X	RD35722 22K
s6	R33	X	X	RD35633 3.3K
s7	R40	X	X	RD35810 100K
s8	R41	X	X	RD35733 33K
s9	C32	X	X	US06127 27P(CH)
s10	C38 C77 C37 C48	X	X	US13510 0.1/16
s11	C40	X	X	US06256 560P(SL)
s12	C44 C47	X	X	US06233 330P(SL)
s13	C34	X	X	UR83710 10/16
s14	C42 C46	X	X	UR83747 47/16
s15	L4.L7	X	X	WG53720 PZ2012U600-3ROT
s16	Q3	X	X	IC17402 C1740S(R/S)
s17	IC2	X	X	XB2354O LC72725KM-UY-TL
s18	XL2	X	X	WF15280 4.332MHZ
s19	R45 R42 R28 R26	RF45747 47K	X	X
s20	R68 R69	RF45710 10K	X	X
s21	R70 RB1	RD35547 470	X	X
s22	R79 R71	RD35747 47K	X	X
s23	R73 R76 R80 R72 R300 R308 R306 R309 R310 R304	RD35510 100	X	X
s24	R82	RD35810 100K	X	X
s25	R83	RD35410 10	X	X
s26	R86 R85	RD35433 33	X	X
s27	R301	RD35633 3.3K	X	X
s28	R303 R302	RD35647 4.7K	X	X
s29	R305 R307	RD35610 1K	X	X
s30	R311	RD35447 47	X	X
s31	R313 R312	RD35847 470K	X	X
s32	R314 R315 R316 R317	RD35810 100K	X	X
s33	J22 J300 J23 J301 J311 J509	RD35000 0	X	X
s34	C80 C51 C50 C74	UU23710 10/16	X	X
s35	C73 C314	UR83710 10/16	X	X
s36	C82 C81 C83 C76 C84 C75	US06222 220P(SL)	X	X
s37	C78 C79	US06020 2P(CH)	X	X
s38	C300	UR83810 100/16	X	X
s39	C406 C405	US06247 470P(SL)	X	X
s40	C302 C301	US06080 8P(CH)	X	X
s41	C307 C305 C306 C310	US03510 0.1/16	X	X
s42	C312 C422 C311 C316	US13510 0.1/16	X	X
s43	L310 L301 L300	WG53720 PZ2012U600-3ROT	X	X
s44	D300 D302 D301	WJ58630 SDV1608H100C050	X	X
s45	Q5	VV65520 DTA143EKA	X	X
s46	IC4	X5615A0 NJM3404AM-TE1	X	X
s47	IC300	YA070A0 S2658E-01-TR	X	X
s48	JK1	VV26950 MD-SB130-90	X	X
s49	CB300	WJ45870 CAM-D960044024B	X	X
s50	ST300	WJ56800 -	X	X
s51	XL300	WH45530 45.1584MHZ	X	X
s52	C35	X	X	US06122 22P(CH)
s53	C93 C94 C421 C423	WK00440 10/16	X	X
s54	C418	US16310 1000P	X	X
s55	R402	RD35347 4.7	X	X
s56	R404 R403	RD35622 2.2K	X	X
s57	C419 C420	US06315 1500P(B)	X	X
s58	IC313	X7375A0 PCM1781DBQR	X	X

SUB

発振周波数：300kHz
新電元MD1423Rで30Vから15Vを作成

発振周波数：500kHz
ROHM BD9781で30Vから5Vを作成

発振周波数：900kHz
ROHM BD9870で30Vから15Vを作成

発振周波数：500kHz
ROHM BD9302で15Vから12Vと5.3Vを作成

発振周波数：380kHz
ROHM BD9322で7Vから5Vを作成

Page 106 K2 to POWER_W701
Page 106 K3 to POWER_W702
Page 106 K4 to POWER_W703
Page 106 K7 to POWER_W704
Page 101 G9 to MAIN_CB3
Page 102 D9 to MAIN_CB303
Page 101 H9 to MAIN_CB5
Page 103 K2 to MAIN_CB504
Page 104 F8 to MAIN_CB801
Page 103 D9 to MAIN_CB501

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
☒	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
△	METAL FILM RESISTOR
☒	METAL PLATE RESISTOR
▨	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

CAPACITOR

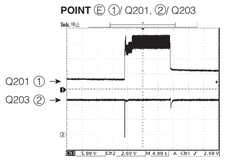
REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	⫼
⊗	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	⫼
◉	CERAMIC TUBULAR CAPACITOR	
◎	POLYESTER FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	
Ⓘ	MICA CAPACITOR	
Ⓟ	POLYPROPYLENE FILM CAPACITOR	
◉	SEMICONDUCTIVE CERAMIC CAPACITOR	

Interchangeable Parts at Manufacture-Stage

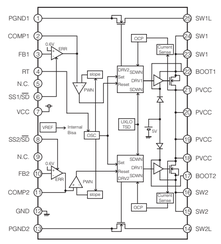
Mark	Reference Parts Number	Parts Name
&1	Q204-206	DTC144EKA KRC104S-RTK/P

NOTICE (model)
(J)····· JAPAN
(U)····· U.S.A
(C)····· CANADA
(R)····· GENERAL
(T)····· CHINA
(K)····· KOREA
(A)····· AUSTRALIA
(B)····· BRITISH
(G)····· EUROPE
(L)····· SINGAPORE
(E)····· SOUTH EUROPE
(V)····· TAIWAN
(F)····· RUSSIAN

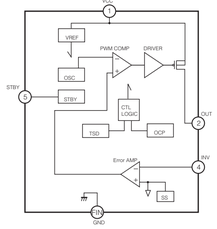
POINT Ⓔ ①/ Q201, ②/ Q203



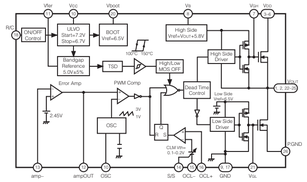
IC207: BD9302FP-E2
2.5 MHz 2 A power switch 2 ch step-down switching regulator



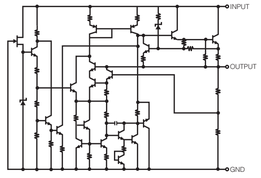
IC202: BD9870FPS-E2
High stand voltage 1 channel step-down switching regulator



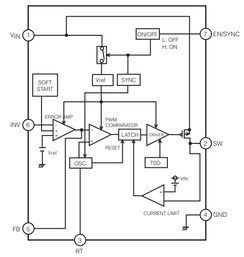
IC203: MD1423R
IC power supply



IC206: NJM7812DL1A
3 terminal voltage regulator

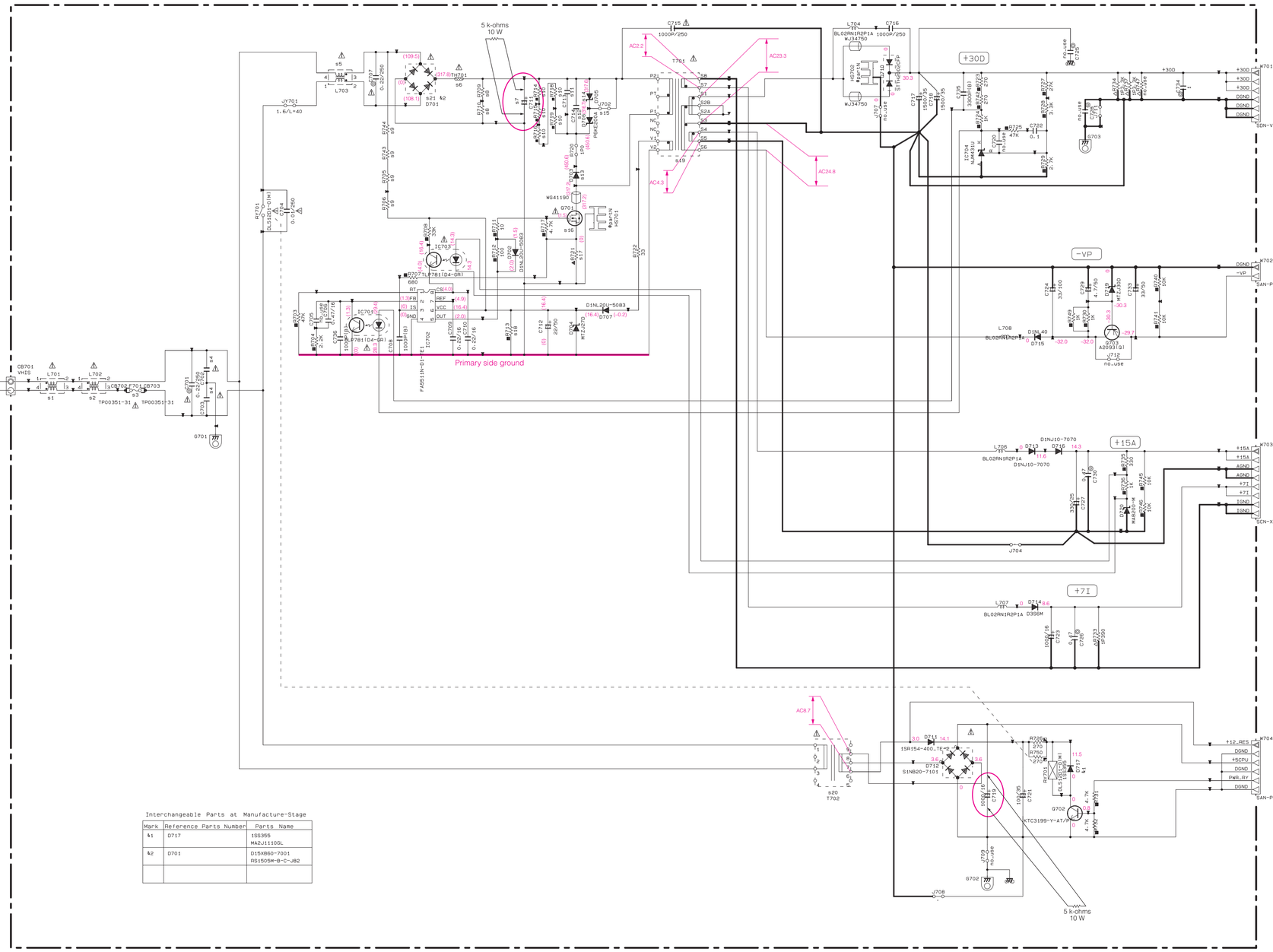


IC209: BD9781HFP
Flexible step-down switching regulator



★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

POWER



NOTICE (model)

(J)····· JAPAN
(U)····· U.S.A
(C)····· CANADA
(R)····· GENERAL
(T)····· CHINA
(K)····· KOREA
(A)····· AUSTRALIA
(B)····· BRITISH
(G)····· EUROPE
(L)····· SINGAPORE
(E)····· SOUTH EUROPE
(V)····· TAIWAN
(F)····· RUSSIAN

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
	CARBON FILM RESISTOR (P=10)
	METAL OXIDE FILM RESISTOR
	METAL FILM RESISTOR
	METAL PLATE RESISTOR
	FIRE PROOF CARBON FILM RESISTOR
	CEMENT MOLDED RESISTOR
	SEMI VARIABLE RESISTOR
	CHIP RESISTOR

CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	⊟
	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	⫴
	CERAMIC TUBULAR CAPACITOR	
	POLYESTER FILM CAPACITOR	
	POLYSTYRENE FILM CAPACITOR	
	MICA CAPACITOR	
	POLYPROPYLENE FILM CAPACITOR	
	SEMICONDUCTIVE CERAMIC CAPACITOR	
	POLYPHENYLENE SULFIDE FILM CAPACITOR	

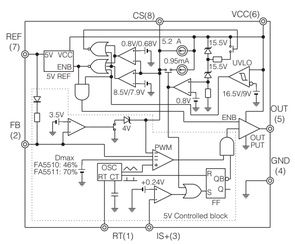
Destination Part List

sXX	LOC	J	UC	TK	A	GL	V
s1	L701	WJ26690 PLH10AN181R1P2	WJ26690 PLH10AN181R1P2	WJ32330 370UH	WJ32330 370UH	WJ32330 370UH	WJ26690 PLH10AN181R1P2
s2	L702	WJ32360 0.9MH	WJ32360 0.9MH	WJ33450 3.6MH	WJ33450 3.6MH	WJ33450 3.6MH	WJ32360 0.9MH
s3	F701	WB22110 5.00A125V	WB22110 5.00A125V	VV07160 2.5A250V	VV07160 2.5A250V	VV07160 2.5A250V	WB22110 5.00A125V
s4	C703 C702	WH03610 2200P/250	WH03610 2200P/250	WH03590 1000P/250	WH03590 1000P/250	WH03590 1000P/250	WH03610 2200P/250
s5	L703	WP51260 7.5MH	WP51260 7.5MH	WN82600 36MH	WN82600 36MH	WN82600 36MH	WP51260 7.5MH
s6	TH701	WF87530 NTPAN4RGLDNB0	WF87530 NTPAN4RGLDNB0	WF87540 NTPAD8RGLDNB0	WF87540 NTPAD8RGLDNB0	WF87540 NTPAD8RGLDNB0	WF87530 NTPAN4RGLDNB0
s7	C711	WN81780 680/200	WN81780 680/200	WN81790 180/400	WN81790 180/400	WN81790 180/400	WN81780 680/200
s8	R710 R709	HF45812 120K	HF45812 120K	HF45827 270K	HF45827 270K	HF45827 270K	HF45812 120K
s9	R744 R743 R705 R706	HF45715 15K	HF45715 15K	HF45733 33K	HF45733 33K	HF45733 33K	HF45715 15K
s10	R719 R714 R718 R715 R716	WJ62490 1PB.2K	WJ62490 1PB.2K	WJ62500 1P33K	WJ62500 1P33K	WJ62500 1P33K	WJ62490 1PB.2K
s11	C713	WJ32240 0.01/250	WJ32240 0.01/250	WJ32230 1000P/630	WJ32230 1000P/630	WJ32230 1000P/630	WJ32240 0.01/250
s12	C714	X	X	WJ32230 1000P/630	WJ32230 1000P/630	WJ32230 1000P/630	X
s13	D703	WJ45930 D1FK60-5063	WJ45930 D1FK60-5063	WJ15190 STTH110A	WJ15190 STTH110A	WJ15190 STTH110A	WJ45930 D1FK60-5063
s14	D705	X	X	WN67240 P6KE200A	WN67240 P6KE200A	WN67240 P6KE200A	X
s15	J702	VN50000 -	VN50000 -	X	X	X	VN50000 -
s16	Q701	WF87190 2SK3523-01R	WF87190 2SK3523-01R	WF87180 2SK3876-01R	WF87180 2SK3876-01R	WF87180 2SK3876-01R	WF87190 2SK3523-01R
s17	R721	WK04370 2P0.012	WH94220 2P0.015	WH01630 2P0.033	WH01630 2P0.033	WH01630 2P0.033	WH94220 2P0.015
s18	R713	RD35827 270K	RD35827 270K	RD35856 560K	RD35856 560K	RD35856 560K	RD35827 270K
s19	T701	X9783A0 ETS01996B	X9783A0 ETS01996B	X9785A0 ETS01997B	X9785A0 ETS01997B	X9785A0 ETS01997B	X9783A0 ETS01996B
s20	T702	YA056A0 YA056	YA056A0 YA056	YA05780 YA057	YA058A0 YA058	YA059A0 YA059	YA060A0 YA060
s21	D701	WP00640 D15XB60-7001	VN95330 D5SB460	VN95330 D5SB460	VN95330 D5SB460	VN95330 D5SB460	VN95330 D5SB460

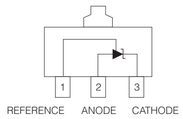
Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
&1	D717	1SS355 MA2J1110GL
&2	D701	D15XB60-7001 RS1505M-B-C-J82

IC702: FA5511N-D1-TE1
CMOS IC for switching power supply control



IC704: NJM431U
Adjustable precision shunt regulator



Safety measures

- Some internal parts in this product contain high voltages and are dangerous. Be sure to take safety measures during servicing, such as wearing insulating gloves.
- Note that positions indicated below are dangerous even after the power is turned off because an electric charge remains and a high voltage continues to exist there.

Before starting any repair work, perform discharge by connecting a discharge resistor (5k-ohms/10W) between terminals at following positions. The time required for discharging is about 30 seconds.

1. C711 on POWER P.C.B..
2. C719 on POWER P.C.B..

★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ! and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

■ REPLACEMENT PARTS LIST

• ELECTRICAL COMPONENT PARTS

WARNING

- Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
- The chip resistor is not supplied as a replacement part.
  * When a chip resistor is necessary, use the following part.
    AAX60720: CHIP RESISTOR SAMPLE BOOK

ABBREVIATIONS IN THIS LIST ARE AS FOLLOWS:

C.A.EL.CHP	: CHIP ALUMI.ELECTROLYTIC CAP
C.CE	: CERAMIC CAP
C.CE.ARRAY	: CERAMIC CAP ARRAY
C.CE.CHP	: CHIP CERAMIC CAP
C.CE.ML	: MULTILAYER CERAMIC CAP
C.CE.M.CHP	: CHIP MULTILAYER CERAMIC CAP
C.CE.SAFTY	: RECOGNIZED CERAMIC CAP
C.CE.TUBLR	: CERAMIC TUBULAR CAP
C.CE.SMI	: SEMI CONDUCTIVE CERAMIC CAP
C.EL	: ELECTROLYTIC CAP
C.MICA	: MICA CAP
C.ML.FLM	: MULTILAYER FILM CAP
C.MP	: METALLIZED PAPER CAP
C.MYLAR	: MYLAR FILM CAP
C.MYLAR.ML	: MULTILAYER MYLAR FILM CAP
C.PAPER	: PAPER CAPACITOR
C.PLS	: POLYSTYRENE FILM CAP
C.POL	: POLYESTER FILM CAP
C.POLY	: POLYETHYLENE FILM CAP
C.PP	: POLYPROPYLENE FILM CAP
C.TNTL	: TANTALUM CAP
C.TNTL.CHP	: CHIP TANTALUM CAP
C.TRIM	: TRIMMER CAP
CN	: CONNECTOR
CN.BS.PIN	: CONNECTOR,BASE PIN
CN.CANNON	: CONNECTOR,CANNON
CN.DIN	: CONNECTOR,DIN
CN.FLAT	: CONNECTOR,FLAT CABLE
CN.POST	: CONNECTOR,BASE POST
COIL.MX.AM	: COIL,AM MIX
COIL.AT.FM	: COIL,FM ANTENNA
COIL.DT.FM	: COIL,FM DETECT
COIL.MX.FM	: COIL,FM MIX
COIL,OUTPT	: OUTPUT COIL
DIOD.ARRAY	: DIODE ARRAY
DIODE.BRG	: DIODE BRIDGE
DIODE.CHP	: CHIP DIODE
DIODE.VAR	: VARACTOR DIODE
DIOD.Z.CHP	: CHIP ZENER DIODE
DIODE.ZENR	: ZENER DIODE
DSCR.CE	: CERAMIC DISCRIMINATOR
FER.BEAD	: FERRITE BEADS
FER.CORE	: FERRITE CORE
FET.CHP	: CHIP FET
FL.DSPLY	: FLUORESCENT DISPLAY
FLTR.CE	: CERAMIC FILTER
FLTR.COMB	: COMB FILTER MODULE
FLTR.LC.RF	: LC FILTER,EMI
GND.MTL	: GROUND PLATE
GND.TERM	: GROUND TERMINAL
HOLDER.FUS	: FUSE HOLDER
IC.PRTCT	: IC PROTECTOR
JUMPER.CN	: JUMPER CONNECTOR
JUMPER.TST	: JUMPER,TEST POINT
L.DTCT	: LIGHT DETECTING MODULE
L.EMIT	: LIGHT EMITTING MODULE
LED.DSPLY	: LED DISPLAY
LED.INFRD	: LED,INFRARED
MODUL.RF	: MODULATOR,RF
PHOT.CPL	: PHOTO COUPLER
PHOT.INTR	: PHOTO INTERRUPTER
PHOT.RFLCT	: PHOTO REFLECTOR
PIN.TEST	: PIN,TEST POINT
PLST.RIVET	: PLASTIC RIVET
R.ARRAY	: RESISTOR ARRAY
R.CAR.	: CARBON RESISTOR
R.CAR.CHP	: CHIP RESISTOR
R.CAR.FP	: FLAME PROOF CARBON RESISTOR
R.FUS	: FUSABLE RESISTOR
R.MTL.CHP	: CHIP METAL FILM RESISTOR
R.MTL.FLM	: METAL FILM RESISTOR
R.MTL.OXD	: METAL OXIDE FILM RESISTOR
R.MTL.PLAT	: METAL PLATE RESISTOR
RSNR.CE	: CERAMIC RESONATOR
RSNR.CRYS	: CRYSTAL RESONATOR
R.TW.CEM	: TWIN CEMENT FIXED RESISTOR
R.CEMENT	: CEMENT RESISTOR
SCR.BND.HD	: BIND HEAD B-TIGHT SCREW
SCR.BW.HD	: BW HEAD TAPPING SCREW
SCR.CUP	: CUP TIGHT SCREW
SCR.TERM	: SCREW TERMINAL
SCR.TR	: SCREW,TRANSISTOR
SUPRT.PCB	: SUPPORT,P.C.B.
SURG.PRTCT	: SURGE PROTECTOR
SW.TACT	: TACT SWITCH
SW.LEAF	: LEAF SWITCH
SW.LEVER	: LEVER SWITCH
SW.MICRO	: MICRO SWITCH
SW.PUSH	: PUSH SWITCH
SW.RT.ENC	: ROTARY ENCODER
SW.RT.MTR	: ROTARY SWITCH WITH MOTOR
SW.RT	: ROTARY SWITCH
SW.SLIDE	: SLIDE SWITCH
TERM.SP	: SPEAKER TERMINAL
TERM.WRAP	: WRAPPING TERMINAL
THRMST.CHP	: CHIP THERMISTOR
TR.CHP	: CHIP TRANSISTOR
TR.DGT	: DIGITAL TRANSISTOR
TR.DGT.CHP	: CHIP DIGITAL TRANSISTOR
TRANS	: TRANSFORMER
TRANS.PULS	: PULSE TRANSFORMER
TRANS.PWR	: POWER TRANSFORMER ASS'Y
TUNER.AM	: TUNER PACK,AM
TUNER.FM	: TUNER PACK,FM
TUNER.PK	: FRONT-ENDTUNER PACK
VR	: ROTARY POTENTIOMETER
VR.MTR	: POTENTIOMETER WITH MOTOR
VR.SW	: POTENTIOMETER WITH ROTARY SW
VR.SLIDE	: SLIDE POTENTIOMETER
VR.TRIM	: TRIMMER POTENTIOMETER

DVR-700

P.C.B. FRONT

	Ref No.	Part No.	Description	Markets
*		WQ312700	P. C. B. FRONT	
	CB301	V2215900	CN. BS. PIN 17P	
	CB303	VQ044400	CN. BS. PIN 9P	
	CB304	V6313500	CN. BS. PIN 27P SE	
	CB305	VB390200	CN. BS. PIN 6P	
*	CB306	WN698000	CN. USB 4P UBAS-4R-D14D	
	CB311	VB390400	CN. BS. PIN 8P	
	CB313	VB858400	CN. BS. PIN 5P	
*	CB314	VY717800	CN. BS. PIN 5P BLUE	
	CB315	VB390000	CN. BS. PIN 4P	
	CB317	VB390300	CN. BS. PIN 7P	
	CB318	WM161300	CN. DSUB D-SUB 15P	
	CB319	VB389800	CN. BS. PIN 2P	
	CB320	VB858500	CN. BS. PIN 6P	
	CB321	VB389800	CN. BS. PIN 2P	
	C301	US062100	C. CE. CHP 100pF 50V B	
	C302-304	US060800	C. CE. CHP 8pF 50V B	
	C305	UR819100	C. EL 1000uF 6. 3V	
	C306-308	UR818470	C. EL 470uF 6. 3V	
	C318-319	US135100	C. CE. CHP 0. 1uF 16V	
	C324	US135100	C. CE. CHP 0. 1uF 16V	
	C325-326	US063100	C. CE. CHP 1000pF 50V B	
	C327	US135100	C. CE. CHP 0. 1uF 16V	
	C330	UR818100	C. EL 100uF 6. 3V	
	C331	US061330	C. CE. CHP 33pF 50V B	
	C333	US061330	C. CE. CHP 33pF 50V B	
	C336-337	US061330	C. CE. CHP 33pF 50V B	
	C339	UR837100	C. EL 10uF 16V	
	C340	US064100	C. CE. CHP 0. 01uF 50V B	
	C341	US135100	C. CE. CHP 0. 1uF 16V	
	C342	UR818100	C. EL 100uF 6. 3V	
	C343	UR838100	C. EL 100uF 16V	
	C344	US062100	C. CE. CHP 100pF 50V B	
	C345	US046100	C. CE. CHP 1uF 25V	
	C351	UR848100	C. EL 100uF 25V	
	C352	US135100	C. CE. CHP 0. 1uF 16V	
	C353	US065100	C. CE. CHP 0. 1uF 50V B	
	C354-355	UR848100	C. EL 100uF 25V	
	C357	US065100	C. CE. CHP 0. 1uF 50V B	
	C358	US135330	C. CE. CHP 0. 33uF 16V	
	C359	US135100	C. CE. CHP 0. 1uF 16V	
	C360	US063470	C. CE. CHP 4700pF 50V B	
	C361	US063680	C. CE. CHP 6800pF 50V B	
	C362	US135100	C. CE. CHP 0. 1uF 16V	
	C364	UR847100	C. EL 10uF 25V	
	C366	US062100	C. CE. CHP 100pF 50V B	
	C368	UR838100	C. EL 100uF 16V	
	C372	US135100	C. CE. CHP 0. 1uF 16V	
	C377-381	US062100	C. CE. CHP 100pF 50V B	
	C382-383	US065100	C. CE. CHP 0. 1uF 50V B	
	C384	US046100	C. CE. CHP 1uF 25V	
	C385	US135100	C. CE. CHP 0. 1uF 16V	
*	C386	WH775300	C. EL 220uF 25V	
	C387-388	US046100	C. CE. CHP 1uF 25V	
	C389	US062100	C. CE. CHP 100pF 50V B	
*	C390-391	WE477400	C. EL 47uF 16V	
	C392-394	US062100	C. CE. CHP 100pF 50V B	

✻ New Parts

P.C.B. FRONT and P.C.B. OPERATION

	Ref No.	Part No.	Description	Markets
	C404	US135100	C. CE. CHP 0. 1uF 16V	
	C405	UR837100	C. EL 10uF 16V	
	C406	US064100	C. CE. CHP 0. 01uF 50V B	
	C408	US035100	C. CE. CHP 0. 1uF 16V B	
	C413	US035100	C. CE. CHP 0. 1uF 16V B	
	C414	US145100	C. CE. CHP 0. 1uF 25V	
	C415	US065100	C. CE. CHP 0. 1uF 50V B	
	C416-419	US062100	C. CE. CHP 100pF 50V B	
	C420	US062330	C. CE. CHP 330pF 50V B	
	C421	US062470	C. CE. CHP 470pF 50V B	
	C422	UR837220	C. EL 22uF 16V	
	C423	US062470	C. CE. CHP 470pF 50V B	
	C424	UR848100	C. EL 100uF 25V	
	C425	US062470	C. CE. CHP 470pF 50V B	
	C426	UR867220	C. EL 22uF 50V	
	C430	US035100	C. CE. CHP 0. 1uF 16V B	
	C433-435	US064100	C. CE. CHP 0. 01uF 50V B	
	C437-439	US064100	C. CE. CHP 0. 01uF 50V B	
	C440-454	US062100	C. CE. CHP 100pF 50V B	
	C461-473	US062100	C. CE. CHP 100pF 50V B	
	C474	UR837470	C. EL 47uF 16V	
	C475	US135100	C. CE. CHP 0. 1uF 16V	
	D301-302	VU992600	DIODE. ZENR MA8051-M 5. 1V	
	D304	VT332900	DIODE 1SS355	
	D305	VV307700	DIODE 1N4002S	
	D306-307	V6267600	DIODE RB051L-40	
	D308	VV307700	DIODE 1N4002S	
	D312-313	VT332900	DIODE 1SS355	
	IC301	XZ744B00	IC TC74VHCT541AFT	
	IC302	X8398A00	IC TC7SET08FU(T5L, JF)	
*	IC303	YA347A00	IC. CPU. SUB R5F21247SNFP	(unwritten)
*	IC305	X9563A00	IC MIC2005-0. 5YM6	
	IC307	X8705A00	IC KIA78M05F	
*	IC308	X9888A00	IC BA5DD0WHFP	
*	IC309	X7651A00	IC BD9302FP-E2	
	IC312	X8527A00	IC TC7WZ04FK	
*	IC313	XU797B00	IC TC74VHC245FT(EL, K)	
*	IC315	X9927A00	IC BD7931F	
*	PJ301	WJ476400	JACK. PIN MSD-244V-121	
	PN303-304	V9637500	PIN L=70 #18	
	Q301	WC435000	TR. DGT KRC102S-RTK	
	Q302-304	WC435100	TR. DGT KRC104S-RTK	
	Q306-307	WC435100	TR. DGT KRC104S-RTK	
	R393	HV754100	R. CAR. FP 10 Ω 1/4W	
	R394-396	VU224000	R. MTL. FLM 0. 22 Ω 1W	
	R402	VP940000	R. MTL. OXD 22 Ω 1W	
	R404	VP940000	R. MTL. OXD 22 Ω 1W	
	R418	HV753100	R. CAR. FP 1 Ω 1/4W	
	ST301	WA789600	SCR. TERM M3	
	XL301	WF997400	RSNR. CE 20MHz	
*		WQ312800	P. C. B. OPERATION	
*	CB1	WB414200	CN. BS. PIN FMN 5P TE	
*	CB9	WB414200	CN. BS. PIN FMN 5P TE	
	C1	US064100	C. CE. CHP 0. 01uF 50V B	

✻ New Parts

DVR-700

P.C.B. OPERATION

	Ref No.	Part No.		Description	Markets
	C2	UR867100	C. EL	10uF 50V	
	C3	US035100	C. CE. CHP	0. 1uF 16V B	
	C4	US063100	C. CE. CHP	1000pF 50V B	
	C5-6	US135100	C. CE. CHP	0. 1uF 16V	
	C7	US064100	C. CE. CHP	0. 01uF 50V B	
	C8	US065100	C. CE. CHP	0. 1uF 50V B	
	C9	UR868100	C. EL	100uF 50V	
	C10-11	US064100	C. CE. CHP	0. 01uF 50V B	
	C13	US135100	C. CE. CHP	0. 1uF 16V	
	C16	UR818330	C. EL	330uF 6. 3V	
	C17	US135100	C. CE. CHP	0. 1uF 16V	
	C18	US062100	C. CE. CHP	100pF 50V B	
	C20	US064100	C. CE. CHP	0. 01uF 50V B	
	C21	US065100	C. CE. CHP	0. 1uF 50V B	
	C22	UR868100	C. EL	100uF 50V	
	C23-24	US065100	C. CE. CHP	0. 1uF 50V B	
	C25	UR867220	C. EL	22uF 50V	
	C26	US044220	C. CE. CHP	0. 022uF 25V B	
	C27	UR867220	C. EL	22uF 50V	
	C28	US065100	C. CE. CHP	0. 1uF 50V B	
	C29	US145100	C. CE. CHP	0. 1uF 25V	
	C30	US135100	C. CE. CHP	0. 1uF 16V	
	C31	US061220	C. CE. CHP	22pF 50V B	
	C32	UR867470	C. EL	47uF 50V	
	C33	UR868100	C. EL	100uF 50V	
	C34	US062100	C. CE. CHP	100pF 50V B	
	C35	US135100	C. CE. CHP	0. 1uF 16V	
	C42-43	US062100	C. CE. CHP	100pF 50V B	
	C52-53	US135100	C. CE. CHP	0. 1uF 16V	
	C59	US135100	C. CE. CHP	0. 1uF 16V	
	C61	US064100	C. CE. CHP	0. 01uF 50V B	
*	D1	WN605200	LED	BLUE SLR343BC7T	
	D6	VU993800	DIODE. ZENR	MA8068-M 6. 8V	
*	D7	WN605200	LED	BLUE SLR343BC7T	
	IC1	X6386A00	IC	M66003-0131FP	
	IC2	X6406A00	IC	TC74HC14AF(EL, F)	
	Q2-8	WC529400	TR	KTC3875S Y GR RTK	
	Q9	WM903800	TR	2SC4730 R, S, T	
	Q10	WM903700	TR	2SA1826 R, S, T	
	Q11	WC529400	TR	KTC3875S Y GR RTK	
*	Q12	WP064800	FET	RSR015P03TL	
	Q13	WC435000	TR. DGT	KRC102S-RTK	
	SW1-5	WD483100	SW. TACT	SKRGAAD010	
	SW8-10	WD483100	SW. TACT	SKRGAAD010	
	U1	WK918500	L. DTCT	GP1UE271RKVF	
	V1	WN049000	FL. DSPLY	17-BT-32GNK	
		WA790900	SPACER	4. 6x10x32	
*		WN801200	SPACER	LEDX-4-B	

✻ New Parts

NS-PSW700

P.C.B. MAIN

	Ref No.	Part No.		Description	Markets
*		WQ312300	P. C. B.	MAIN	UC
*		WQ312400	P. C. B.	MAIN	ALV
*		WQ312500	P. C. B.	MAIN	GF
	CB1	VM923600	CN. BS. PIN	13P	
	CB3	VB390000	CN. BS. PIN	4P	
	CB5	LB918040	CN. BS. PIN	4P	
	CB300	WJ458700	CN. XM	4P, CAM-D96	UC
	CB303	VB390100	CN. BS. PIN	5P	
	CB501	VB390600	CN. BS. PIN	10P	
	CB502	VQ044400	CN. BS. PIN	9P	
	CB503	WM161300	CN. D-SUB	D-SUB 15P	
	CB504	LB918070	CN. BS. PIN	7P	
	CB801	LB932050	CN. BS. PIN	5P	
	CB802	LB933020	CN. BS. PIN	2P	
	C3	UR837470	C. EL	47uF 16V	
	C6	US135100	C. CE. CHP	0. 1uF 16V	
	C7	US063220	C. CE. CHP	2200pF 50V B	
	C13	UR837100	C. EL	10uF 16V	
	C14	US064100	C. CE. CHP	0. 01uF 50V B	
	C15	US135100	C. CE. CHP	0. 1uF 16V	
	C16-17	UR837100	C. EL	10uF 16V	
	C18	US064100	C. CE. CHP	0. 01uF 50V B	
	C19	US135100	C. CE. CHP	0. 1uF 16V	
	C20	UR838100	C. EL	100uF 16V	
	C21-22	US135100	C. CE. CHP	0. 1uF 16V	
	C23	UR837100	C. EL	10uF 16V	
	C24	US064100	C. CE. CHP	0. 01uF 50V B	
	C25	UR837470	C. EL	47uF 16V	
	C26	UR837100	C. EL	10uF 16V	
	C27	UR837470	C. EL	47uF 16V	
	C28	US135100	C. CE. CHP	0. 1uF 16V	
	C29	UR866220	C. EL	2. 2uF 50V	
	C30-31	US061220	C. CE. CHP	22pF 50V B	
	C32	US061270	C. CE. CHP	27pF 50V B	GF
	C33	UR847220	C. EL	22uF 25V	
	C34	UR837100	C. EL	10uF 16V	GF
	C35	US061220	C. CE. CHP	22pF 50V B	GF
	C36	US135100	C. CE. CHP	0. 1uF 16V	
	C37-38	US135100	C. CE. CHP	0. 1uF 16V	GF
	C39	UU237100	C. EL	10uF 16V	
	C40	US062560	C. CE. CHP	560pF 50V B	GF
	C41	UU237100	C. EL	10uF 16V	
	C42	UR837470	C. EL	47uF 16V	GF
	C43	UR838100	C. EL	100uF 16V	
	C44	US062330	C. CE. CHP	330pF 50V B	GF
	C45	UR838470	C. EL	470uF 16V	
	C46	UR837470	C. EL	47uF 16V	GF
	C47	US062330	C. CE. CHP	330pF 50V B	GF
	C48	US135100	C. CE. CHP	0. 1uF 16V	GF
	C49	US062220	C. CE. CHP	220pF 50V B	
	C50-51	UU237100	C. EL	10uF 16V	UC
	C52-57	UU237100	C. EL	10uF 16V	
	C58-60	US062220	C. CE. CHP	220pF 50V B	
	C63-66	US062220	C. CE. CHP	220pF 50V B	
	C67	US135100	C. CE. CHP	0. 1uF 16V	
	C68-69	UR838100	C. EL	100uF 16V	
	C70	US135100	C. CE. CHP	0. 1uF 16V	

✻ New Parts

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P.C.B. MAIN

Ref No.	Part No.	Description			Markets
C71	UR838100	C. EL	100uF	16V	
C72	US135100	C. CE. CHP	0. 1uF	16V	
C73	UR837100	C. EL	10uF	16V	UC
C74	UU237100	C. EL	10uF	16V	UC
C75-76	US062220	C. CE. CHP	220pF	50V B	UC
C77	US135100	C. CE. CHP	0. 1uF	16V	GF
C78-79	US060200	C. CE. CHP	2pF	50V B	UC
C80	UU237100	C. EL	10uF	16V	UC
C81-84	US062220	C. CE. CHP	220pF	50V B	UC
C85	UR837100	C. EL	10uF	16V	
C86-87	US061220	C. CE. CHP	22pF	50V B	
C89-92	US062470	C. CE. CHP	470pF	50V B	
C93-94	WK004400	C. CE. M. CHP	10uF	16V	UC
C97-98	US163100	C. CE. CHP	1000pF	50V	
C100	US163100	C. CE. CHP	1000pF	50V	
C300	UR838100	C. EL	100uF	16V	UC
C301-302	US060800	C. CE. CHP	8pF	50V B	UC
C305-307	US035100	C. CE. CHP	0. 1uF	16V B	UC
C310	US035100	C. CE. CHP	0. 1uF	16V B	UC
C311-312	US135100	C. CE. CHP	0. 1uF	16V	UC
C314	UR837100	C. EL	10uF	16V	UC
C316	US135100	C. CE. CHP	0. 1uF	16V	UC
C317-318	US061300	C. CE. CHP	30pF	50V B	
C319	US062100	C. CE. CHP	100pF	50V B	
C320	UR838100	C. EL	100uF	16V	
C321-322	US135100	C. CE. CHP	0. 1uF	16V	
C323	UR818220	C. EL	220uF	6. 3V	
C324	UR837100	C. EL	10uF	16V	
C325	US126100	C. CE. CHP	1uF	10V	
C326	US135100	C. CE. CHP	0. 1uF	16V	
C327	UR837100	C. EL	10uF	16V	
C328-329	US163100	C. CE. CHP	1000pF	50V	
C330-331	US135100	C. CE. CHP	0. 1uF	16V	
C332-333	US163100	C. CE. CHP	1000pF	50V	
C334	US135100	C. CE. CHP	0. 1uF	16V	
C335	US163100	C. CE. CHP	1000pF	50V	
C336	US135100	C. CE. CHP	0. 1uF	16V	
C337	UR838100	C. EL	100uF	16V	
C338	US062470	C. CE. CHP	470pF	50V B	
C339-340	US163100	C. CE. CHP	1000pF	50V	
C341-343	US135100	C. CE. CHP	0. 1uF	16V	
C344	US163100	C. CE. CHP	1000pF	50V	
C345	US135100	C. CE. CHP	0. 1uF	16V	
C346	US163100	C. CE. CHP	1000pF	50V	
C347	UR818470	C. EL	470uF	6. 3V	
C348-349	US135100	C. CE. CHP	0. 1uF	16V	
C350	UR838100	C. EL	100uF	16V	
C351	US163100	C. CE. CHP	1000pF	50V	
C352	US135100	C. CE. CHP	0. 1uF	16V	
C353	US062680	C. CE. CHP	680pF	50V B	
C354	US163100	C. CE. CHP	1000pF	50V	
C355	US135100	C. CE. CHP	0. 1uF	16V	
C356	US163100	C. CE. CHP	1000pF	50V	
C357	US135100	C. CE. CHP	0. 1uF	16V	
C358	UR818470	C. EL	470uF	6. 3V	
C359-366	US163100	C. CE. CHP	1000pF	50V	
C367	UR818220	C. EL	220uF	6. 3V	

✻ New Parts

P.C.B. MAIN

	Ref No.	Part No.	Description			Markets
	C368	UR838100	C. EL	100uF	16V	
	C369	US135100	C. CE. CHP	0. 1uF	16V	
	C370	UR838100	C. EL	100uF	16V	
	C371-374	US135100	C. CE. CHP	0. 1uF	16V	
	C375-376	US063100	C. CE. CHP	1000pF	50V B	
	C377-378	US135100	C. CE. CHP	0. 1uF	16V	
	C379-382	US063100	C. CE. CHP	1000pF	50V B	
	C383-387	US135100	C. CE. CHP	0. 1uF	16V	
	C388	UR837100	C. EL	10uF	16V	
	C389-404	US135100	C. CE. CHP	0. 1uF	16V	
	C405-406	US062470	C. CE. CHP	470pF	50V B	UC
	C407	US062470	C. CE. CHP	470pF	50V B	
	C410	US061220	C. CE. CHP	22pF	50V B	
	C411	US062470	C. CE. CHP	470pF	50V B	
	C412-414	US061220	C. CE. CHP	22pF	50V B	
	C416	US061220	C. CE. CHP	22pF	50V B	
	C417	US062470	C. CE. CHP	470pF	50V B	
	C418	US163100	C. CE. CHP	1000pF	50V	UC
	C419-420	US063150	C. CE. CHP	1500pF	50V B	UC
	C421	WK004400	C. CE. M. CHP	10uF	16V	UC
	C422	US135100	C. CE. CHP	0. 1uF	16V	UC
	C423	WK004400	C. CE. M. CHP	10uF	16V	UC
	C424	US135100	C. CE. CHP	0. 1uF	16V	
	C505	UR837220	C. EL	22uF	16V	
	C506	UN837330	C. EL	33uF	16V	
	C509	UR837330	C. EL	33uF	16V	
	C511	WJ047200	C. EL	22uF	50V	
	C512-513	US135100	C. CE. CHP	0. 1uF	16V	
	C514	UR818220	C. EL	220uF	6. 3V	
	C515	US135100	C. CE. CHP	0. 1uF	16V	
	C516	WB165500	C. EL	0. 33F	5. 5V	
	C517	UR818220	C. EL	220uF	6. 3V	
	C518	UR818330	C. EL	330uF	6. 3V	
	C519-525	US135100	C. CE. CHP	0. 1uF	16V	
	C526	US062220	C. CE. CHP	220pF	50V B	
	C528	US062100	C. CE. CHP	100pF	50V B	
	C529	US062220	C. CE. CHP	220pF	50V B	
	C533	US135100	C. CE. CHP	0. 1uF	16V	
	C534	UR837470	C. EL	47uF	16V	
	C536-537	US135100	C. CE. CHP	0. 1uF	16V	
	C538	UR838100	C. EL	100uF	16V	
	C539	US135100	C. CE. CHP	0. 1uF	16V	
	C540	UR867470	C. EL	47uF	50V	
	C542	US135100	C. CE. CHP	0. 1uF	16V	
*	C543	WN951300	C. EL	10uF	16V	
	C544	US135100	C. CE. CHP	0. 1uF	16V	
	C800	US135100	C. CE. CHP	0. 1uF	16V	
	C801	US064100	C. CE. CHP	0. 01uF	50V B	
	C802	US135100	C. CE. CHP	0. 1uF	16V	
	C803	US064100	C. CE. CHP	0. 01uF	50V B	
	C804-807	US135100	C. CE. CHP	0. 1uF	16V	
	C808	UR837100	C. EL	10uF	16V	
	C809	US135100	C. CE. CHP	0. 1uF	16V	
*	C810	WN951300	C. EL	10uF	16V	
	C811	UR838100	C. EL	100uF	16V	
*	C812-813	WN951300	C. EL	10uF	16V	
	C814-817	US135100	C. CE. CHP	0. 1uF	16V	

✻ New Parts

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P.C.B. MAIN

	Ref No.	Part No.		Description	Markets
*	C818	WN951300	C. EL	10uF 16V	
	C819-822	US135100	C. CE. CHP	0. 1uF 16V	
*	C823-828	UB044330	C. CE. M. CHP	0. 033uF 50V	
	C829-836	US065100	C. CE. CHP	0. 1uF 50V B	
	C837-838	WG411700	C. EL	470uF 35V	
	C840-842	VE326800	C. MYLAR	0. 47uF 50V	
	C843	WG411700	C. EL	470uF 35V	
	C844-849	VE326000	C. MYLAR	0. 1uF 50V	
	C850-855	US063100	C. CE. CHP	1000pF 50V B	
	C856-861	US064100	C. CE. CHP	0. 01uF 50V B	
*	C866-867	UB044330	C. CE. M. CHP	0. 033uF 50V	
	C876-878	US065100	C. CE. CHP	0. 1uF 50V B	
	C879-880	US062470	C. CE. CHP	470pF 50V B	
	D1	VU995500	DIODE. ZENR	MA8100-H 10. 3V	
	D300-302	WJ586300	VARISTOR	SDV1608H100C050YPT	UC
	D304	VT332900	DIODE	1SS355	
	D306	VT332900	DIODE	1SS355	
	D500-506	VU992600	DIODE. ZENR	MA8051-M 5. 1V	
	D507-509	VT332900	DIODE	1SS355	
	D511	VT332900	DIODE	1SS355	
	IC1	X7919A00	IC	AK4588VQ	
	IC2	X8235A00	IC	LC72725KM	GF
	IC3	X8111A00	IC	BD3843FS-E2	
	IC4	X5615A00	IC	NJM3404AM-TE1	UC
	IC5	XZ509A00	IC	TC74VHCU04FT INVER	
	IC301-302	XV894A00	IC	TC74VHC153FT MULTI	
	IC304	X5945A00	IC	PQ012FZ01ZPH	
	IC305	X6051A00	IC	UPC29M33T-E1-AZ	
	IC306	XZ744B00	IC	TC74VHCT541AFT	
	IC307	X5693B00	IC	M12L16161A-7TG	
	IC308	X4964B00	IC	TC74VHC541FT(EL, K)	
*	IC309	YA245A00	IC. MEMORY	EN29LV400AB-70TCP	(written)
	IC310	X8527A00	IC	TC7WZ04FK	
*	IC311	XU797B00	IC	TC74VHC245FT(EL, K)	
	IC313	X7375A00	IC	PCM1781DBQR	UC
	IC500	X8328A00	IC. CPU. MAIN	M30878FJBGP	(unwritten)
*	IC501	YA150A00	IC	BR24L08FVM-WTR	
*	IC502	XU797B00	IC	TC74VHC245FT(EL, K)	
	IC503	XV190A00	IC	NJM2904M OP AMP	
*	IC504	X8385A00	IC	TC7WHU04FK TE85L	
*	IC800	X9716A00	IC	TAS5086	
*	IC801-802	X9776A00	IC	TAS5342LDDV	
	JK1	VV269500	CN	8P DIN	UC
*	PJ1	WP079900	JACK. PIN	2P MSD-252V-04	
	PJ2	V8795700	JACK. PIN	1P	
	PN1	V9637500	PIN	L=70 #18	
	PN300-301	V9637500	PIN	L=70 #18	
	Q1	iC181510	TR	2SC1815 Y	
	Q2	WC883400	TR	2SD2704 K	
	Q3	iC174020	TR	2SC1740S QRS	GF
	Q4	VV556400	TR	2SC2412K Q, R, S	
	Q5	VV655200	TR. DGT	DTA143EKA	UC
	Q500	VV556500	TR	2SA1037K Q, R, S	
	Q501	VV655700	TR. DGT	DTC144EKA	
	R344	HV753100	R. CAR. FP	1 Ω 1/4W	
	R354	VP939500	R. MTL. FLM	1 Ω 1W	
	ST1	WA789600	SCR. TERM	M3	

✻ New Parts

P.C.B. MAIN and P.C.B. SUB

	Ref No.	Part No.		Description	Markets
	ST800-801	WA789600	SCR. TERM	M3	
*	TE800	WN771000	TERM. SP	2P YOKO NLA101-031	
	U1-2	WN333200	CN. PHOTO. R	1P JSR1165	
	XL2	WF152800	RSNR. CRYS	4. 332MHz	GF
	XL300	WH455300	RSNR. CRYS	45. 1584MHz	UC
	XL301	WJ625200	RSNR. CRYS	24. 576MHz	
	XL500	WF997400	RSNR. CE	20MHz	
		WP503000	P. C. B.	SUB	
	CB201	LB932060	CN. BS. PIN	6P	
	CB202	VB389800	CN. BS. PIN	2P	
	CB203	LB918080	CN. BS. PIN	8P	
	CB204	VB390200	CN. BS. PIN	6P	
	C202	WP380300	C. EL	6800uF 35V	
	C204-205	WQ110000	C. EL. CHP	220uF 25V	
	C207	WP381900	C. CE. M. CHP	4. 7uF 50V	
	C208	US065100	C. CE. CHP	0. 1uF 50V B	
	C209	WP381900	C. CE. M. CHP	4. 7uF 50V	
	C210	US064100	C. CE. CHP	0. 01uF 50V B	
	C211	WQ109700	C. EL. CHP	470uF 16V	
	C212-213	US063100	C. CE. CHP	1000pF 50V B	
	C214	WF547900	C. CE. CHP	10uF 25V	
	C216	WQ147400	C. EL. CHP	2. 2uF 50V	
	C217	WQ147700	C. EL. CHP	10uF 50V	
	C218	WQ147400	C. EL. CHP	2. 2uF 50V	
	C220	US034470	C. CE. CHP	0. 047uF 16V B	
	C221	WQ184500	C. EL. CHP	1000uF 10V	
	C222	US065100	C. CE. CHP	0. 1uF 50V B	
	C223	WQ053500	C. EL	470uF 25V	
	C224	US035100	C. CE. CHP	0. 1uF 16V B	
	C229	WQ110200	C. EL. CHP	100uF 35V	
	C230-231	US065100	C. CE. CHP	0. 1uF 50V B	
	C233-234	US063680	C. CE. CHP	6800pF 50V B	
	C235	WP382600	C. CE. M. CHP	1uF 25V	
	C236	WK004400	C. CE. M. CHP	10uF 16V	
	C237	WQ054700	C. EL	220uF 35V	
	C238	US065100	C. CE. CHP	0. 1uF 50V B	
	C239	WQ147100	C. EL. CHP	100uF 16V	
	C240	US065100	C. CE. CHP	0. 1uF 50V B	
	C241	WQ054700	C. EL	220uF 35V	
	C242	US065100	C. CE. CHP	0. 1uF 50V B	
	C243	WP381900	C. CE. M. CHP	4. 7uF 50V	
	C244	US063220	C. CE. CHP	2200pF 50V B	
	C245-248	US065100	C. CE. CHP	0. 1uF 50V B	
	C249	US063680	C. CE. CHP	6800pF 50V B	
	C250	WF547900	C. CE. CHP	10uF 25V	
	C252	US061330	C. CE. CHP	33pF 50V B	
	C253	WJ344400	C. CE. CHP	22uF 6. 3V	
	C254	WF547900	C. CE. CHP	10uF 25V	
	C255-258	US035100	C. CE. CHP	0. 1uF 16V B	
	C259	WQ054700	C. EL	220uF 35V	
	C261-262	US035100	C. CE. CHP	0. 1uF 16V B	
	C263	US135100	C. CE. CHP	0. 1uF 16V	
	C264	US145100	C. CE. CHP	0. 1uF 25V	
	C265	US065100	C. CE. CHP	0. 1uF 50V B	

✻ New Parts

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P.C.B. SUB and P.C.B. POWER

Ref No.	Part No.		Description	Markets
C268-269	US135100	C. CE. CHP	0. 1uF 16V	
C273	WP380500	C. EL	470uF 50V	
C274	WQ050300	C. EL	100uF 10V	
C275	US035100	C. CE. CHP	0. 1uF 16V B	
C276	WF547900	C. CE. CHP	10uF 25V	
C281	WP380600	C. EL	120uF 16V	
C283	US135100	C. CE. CHP	0. 1uF 16V	
C285	US035100	C. CE. CHP	0. 1uF 16V B	
C287	WQ110500	C. EL. CHP	33uF 50V	
C288-289	US062100	C. CE. CHP	100pF 50V B	
C290	US034330	C. CE. CHP	0. 033uF 16V B	
C291-292	US135100	C. CE. CHP	0. 1uF 16V	
C293	US065100	C. CE. CHP	0. 1uF 50V B	
C294	US063220	C. CE. CHP	2200pF 50V B	
D201	VT532500	DIODE	1SR154-400	
D202	VU445900	DIODE	RB050L-40	
D203	V9599200	DIODE. CHP	HSU119 TRF-E	
D204	VU993800	DIODE. ZENR	MA8068-M 6. 8V	
D205	VU993500	DIODE. ZENR	MA8062-H 6. 4V	
D206	VT332900	DIODE	1SS355	
D207	WA295200	DIODE. CHP	D1FS4A-4063	
D208-209	VT332900	DIODE	1SS355	
D210	VU445900	DIODE	RB050L-40	
D212	VU445900	DIODE	RB050L-40	
D213-214	WC549600	DIODE. CHP	RB160M-30 TR	
D218-219	VV220700	DIODE. SHOT	RB501V-40	
IC202	X9850A00	IC	BD9870FPS	
IC203	X9852A00	IC	MD1423R	
IC206	X9763A00	IC	NJM7812DL1A	
IC207	X7651A00	IC	BD9302FP-E2	
IC209	X9846A00	IC	BD9781HFP	
PN201	V9637500	PIN	L=70 #18	
Q201	VV556500	TR	2SA1037K Q, R, S	
Q202	VP872700	TR	2SC4488 S, T	
Q203	VV556400	TR	2SC2412K Q, R, S	
Q204-206	VV655700	TR. DGT	DTC144EKA	
R247-248	VP940600	R. MTL. OXD	220 Ω 1W	
	WP503200	P. C. B.	POWER	UC
	WP503400	P. C. B.	POWER	A
	WP503500	P. C. B.	POWER	GFL
	WP503600	P. C. B.	POWER	V
CB701	VG879900	CN. BS. PIN	2P	
CB702-703	WN103000	CLIP. FUSE	TP00351-31	
⚠ C701	V5877700	C. MYLAR	0. 22uF 250V	
⚠ C702	WH036100	C. CE. SAFTY	2200pF 250V	UCV
⚠ C702	WH035900	C. CE. SAFTY	1000pF 250V	AGFL
⚠ C702	WH036100	C. CE. SAFTY	2200pF 250V	UCV
⚠ C703	WH035900	C. CE. SAFTY	1000pF 250V	AGFL
⚠ C704	WN826300	C. CE. SAFTY	0. 01uF 250V	
C706	VZ281900	C. CE. CHP	0. 47uF 16V K	
⚠ C707	V5877700	C. MYLAR	0. 22uF 250V	
C708	US063100	C. CE. CHP	1000pF 50V B	
C709-710	VZ243300	C. CE. CHP	0. 22uF 16V	
C711	WN817800	C. EL	680uF 200V	UCV

✻ New Parts

P.C.B. POWER

Ref No.	Part No.		Description	Markets
C711	WN817900	C. EL	180uF 400V	AGFL
C712	WJ047200	C. EL	22uF 50V	
C713	WJ322400	C. CE. M. CHP	0. 01uF 250V	UCV
C713-714	WJ322300	C. CE. M. CHP	1000pF 630V	AGFL
⚠ C715	WH035900	C. CE. SAFTY	1000pF 250V	
C716	WK413800	C. CE. M. CHP	1000pF 250V	
C717-718	WN816700	C. EL	1500uF 35V	
C719	V7887500	C. EL	1000uF 16V	
C721	WG226300	C. EL	100uF 35V	
C722	WD969200	C. CE. CHP	0. 1uF 50V K	
C723	WN816900	C. EL	1000uF 16V	
C724	WG348200	C. EL	33uF 100V	
C726	VE326800	C. MYLAR	0. 47uF 50V	
C727	WN933900	C. EL	330uF 25V	
C729	UR866470	C. EL	4. 7uF 50V	
C730	VE326800	C. MYLAR	0. 47uF 50V	
C733	UR867330	C. EL	33uF 50V	
C734	VE327200	C. MYLAR	1uF 50V	
C735	US063330	C. CE. CHP	3300pF 50V B	
C736	US063100	C. CE. CHP	1000pF 50V B	
⚠ D701	VN953300	DIODE. BRG	D5SBA60 5A 600V	
D702	VN478200	DIODE	D1NL20U	
D703	WJ459300	DIODE	D1FK60-5063	UCV
D703	WJ151900	DIODE	STTH110A	AGFL
D704	VG443100	DIODE. ZENR	MTZJ27D 27V	
D705	WN672400	DIODE. ZENR	P6KE200A 200V	AGFL
D706	WN672400	DIODE. ZENR	P6KE200A 200V	
D707	VN478200	DIODE	D1NL20U	
D710	WP549400	DIODE	STTH2002CFP	
D711	VT532500	DIODE	1SR154-400	
⚠ D712	VR253700	DIODE. BRG	S1NB20 1A 200V	
D713	WH316000	DIODE	D1NJ10-7070	
D714	VP974300	DIODE	D3S6M 7002 P7. 5	
D715	VQ308300	DIODE	D1NL40 TP 4083	
D716	WH316000	DIODE	D1NJ10-7070	
D717	VT332900	DIODE	1SS355	
D719	VG443500	DIODE. ZENR	MTZJ30D 30V	
D720	VU998300	DIODE. ZENR	MA8200-M 20V	
⚠ F701	WB221100	FUSE	5A 125V	UCV
⚠ F701	VV071600	FUSE	2. 5A 250V	AGFL
⚠ IC701	WP388200	PHOT. CPL	TLP781(D4-GR, F)	
IC702	X7734A00	IC	FA5511N-D1-TE1	
⚠ IC703	WP388200	PHOT. CPL	TLP781(D4-GR, F)	
IC704	X6770A00	IC	NJM431U(TE1)	
⚠ Q701	WF871900	FET	2SK3523-01R	UCV
⚠ Q701	WF871800	FET	2SK3876-01R	AGFL
Q702	WC292100	TR	KTC3199-Y-AT/P	
Q703	WF764000	TR	2SA2093 Q TP	
R721	WH942200	R. MTL. PLAT	0. 015 Ω 2W	UCV
R721	WH016300	R. MTL. PLAT	0. 033 Ω 2W	AGFL
R726	HV755270	R. CAR. FP	270 Ω 1/4W	
R733	VP944500	R. MTL. OXD	390 Ω 1W	
R734	VP941400	R. MTL. OXD	3. 3K Ω 1W	
R737	VP941400	R. MTL. OXD	3. 3K Ω 1W	
R750	HV755270	R. CAR. FP	270 Ω 1/4W	
RY701	V6434900	RELAY	DC DLS12D1-0(M)	
⚠ T701	X9783A00	TRANS. PWR		UCV

✻ New Parts

NS-PSW700

P.C.B. POWER

	Ref No.	Part No.		Description	Markets
⚠	T701	X9785A00	TRANS. PWR		AGFL
⚠	T702	YA056A00	TRANS. PWR		UC
⚠	T702	YA058A00	TRANS. PWR		A
⚠	T702	YA059A00	TRANS. PWR		GFL
⚠	T702	YA060A00	TRANS. PWR		V
⚠	TH701	WF875300	POSISTOR	NTPAN4R0LDKB0 4.0	UCV
⚠	TH701	WF875400	POSISTOR	NTPAD8R0LDNB0 8.0	AGFL
		WE774400	SCR. BND. HD	3x8 MFZN2B3	

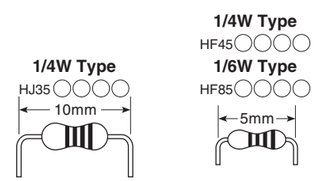
✻ New Parts

Ref No.	Part No.		Description	Markets

✻ New Parts

Carbon Resistors

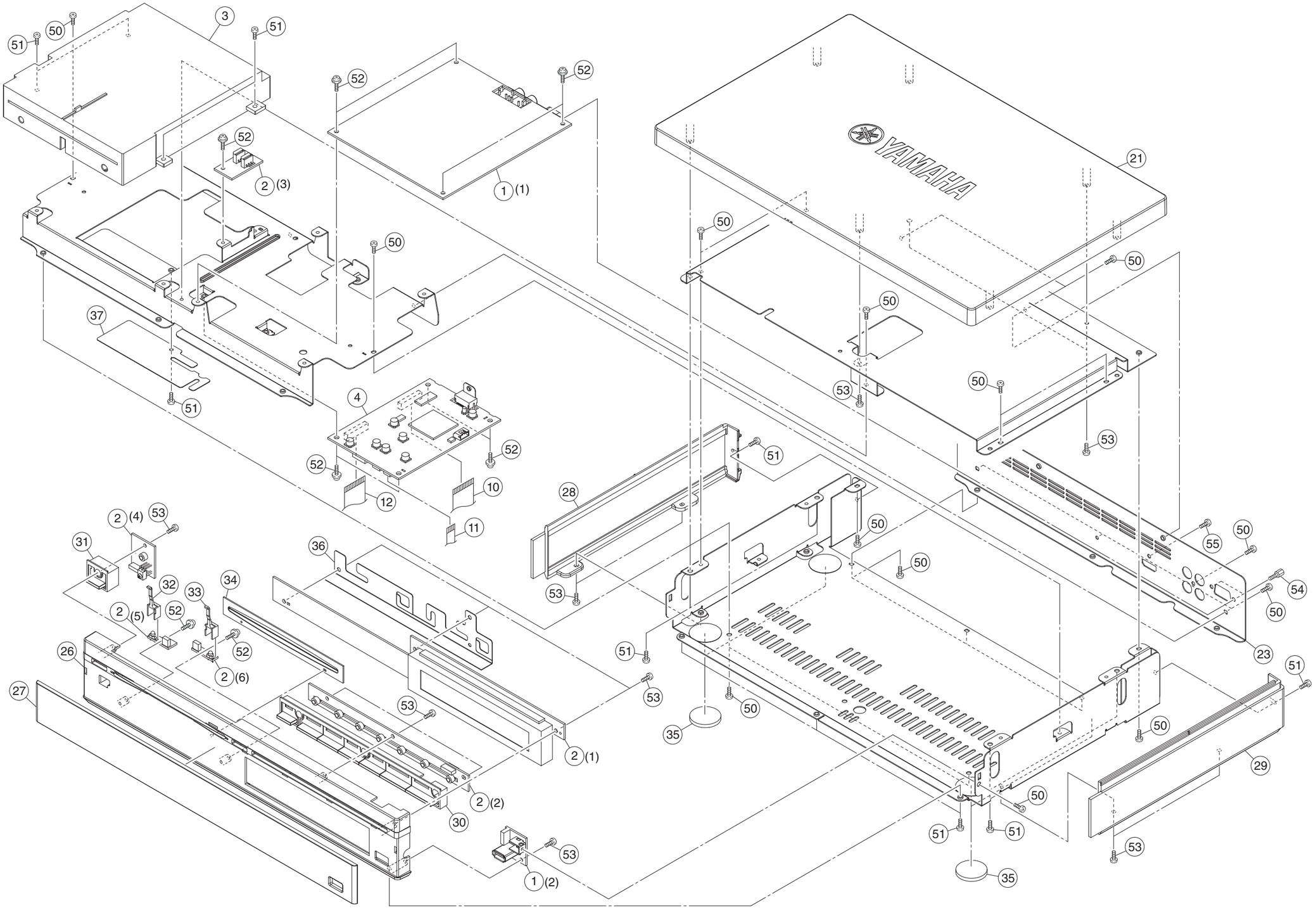
Value	**1/4W** Type Part No.	**1/6W** Type Part No.	Value	**1/4W** Type Part No.	**1/6W** Type Part No.
1.0 Ω	HJ35 3100	HF85 3100	11 kΩ	HF45 7110	HF45 7110
1.8 Ω	HJ35 3180	✻	12 kΩ	HJ35 7120	HF85 7120
2.2 Ω	HJ35 3220	HF85 3220	13 kΩ	HF45 7130	HF45 7130
3.3 Ω	HJ35 3330	HF85 3330	15 kΩ	HF45 7150	HF45 7150
4.7 Ω	HJ35 3470	HF85 3470	18 kΩ	HF45 7180	HF45 7180
5.6 Ω	HJ35 3560	HF85 3560	22 kΩ	HF45 7220	HF45 7220
10 Ω	HF45 4100	HF45 4100	24 kΩ	HF45 7240	HF45 7240
15 Ω	HJ35 4150	HF85 4150	27 kΩ	HJ35 7270	HF85 7270
22 Ω	HF45 4220	HF45 4220	30 kΩ	HF45 7300	HF45 7300
27 Ω	HJ35 4270	HF85 4270	33 kΩ	HF45 7330	HF45 7330
33 Ω	HF45 4330	HF45 4330	36 kΩ	HF45 7360	HF45 7360
39 Ω	HJ35 4470	HF85 4390	39 kΩ	HF45 7390	HF45 7390
47 Ω	HF45 4470	HF45 4470	47 kΩ	HF45 7470	HF45 7470
56 Ω	HF45 4560	HF45 4560	51 kΩ	HF45 7510	HF45 7510
68 Ω	HF45 4680	HF45 4680	56 kΩ	HF45 7560	HF45 7560
75 Ω	HF45 4750	HF45 4750	62 kΩ	HF45 7620	HF45 7620
82 Ω	HF45 4820	HF45 4820	68 kΩ	HF45 7680	HF45 7680
91 Ω	HF45 4910	HF45 4910	82 kΩ	HF45 7820	HF45 7820
100 Ω	HF45 5100	HF45 5100	91 kΩ	HF45 7910	HF45 7910
110 Ω	HJ35 5110	HF85 5110	100 kΩ	HF45 8100	HF45 8100
120 Ω	HF45 5120	HF45 5120	110 kΩ	HF45 8110	HF45 8110
150 Ω	HF45 5150	HF45 5150	120 kΩ	HF45 8120	HF45 8120
160 Ω	HJ35 5160	✻	150 kΩ	HF45 8150	HF45 8150
180 Ω	HF45 5180	HF45 5180	180 kΩ	HF45 8180	HF45 8180
200 Ω	HF45 5200	HF45 5200	220 kΩ	HJ35 8220	HF85 8220
220 Ω	HF45 5220	HF45 5220	270 kΩ	HF45 8270	HF45 8270
270 Ω	HF45 5270	HF45 5270	300 kΩ	HF45 8300	HF45 8300
330 Ω	HF45 5330	HF45 5330	330 kΩ	HF45 8330	HF45 8330
390 Ω	HF45 5390	HF45 5390	390 kΩ	HJ35 8390	HF85 8390
430 Ω	HF45 5430	HF45 5430	470 kΩ	HF45 8470	HF45 8470
470 Ω	HF45 5470	HF45 5470	560 kΩ	HJ35 8560	HF85 8560
510 Ω	HF45 5510	HF45 5510	680 kΩ	HJ35 8680	HF85 8680
560 Ω	HF45 5560	HF45 5560	820 kΩ	HJ35 8820	HF85 8820
680 Ω	HF45 5680	HF45 5680	1.0 MΩ	HF45 9100	HF45 9100
820 Ω	HF45 5820	HF45 5820	1.2 MΩ	HJ35 9120	✻
910 Ω	HF45 5910	HF45 5910	1.5 MΩ	HJ35 9150	HF85 9150
1.0 k	HF45 6100	HF45 6100	1.8 MΩ	HJ35 9180	HF85 9180
1.2 kΩ	HF45 6120	HF45 6120	2.2 MΩ	HJ35 9220	HF85 9220
1.5 kΩ	HF45 6150	HF45 6150	3.3 MΩ	HJ35 9330	HF85 9330
1.8 kΩ	HF45 6180	HF45 6180	3.9 MΩ	HJ35 9390	✻
2.0 kΩ	HJ35 6200	HF85 6200	4.7 MΩ	HJ35 9470	HF85 9470
2.2 kΩ	HF45 6220	HF45 6220			
2.4 kΩ	HJ35 6240	HF85 6240			
2.7 kΩ	HF45 6270	HF45 6270			
3.0 kΩ	HF45 6300	HF45 6300			
3.3 kΩ	HF45 6330	HF45 6330			
3.6 kΩ	HJ35 6360	HF85 6360			
3.9 kΩ	HF45 6390	HF45 6390			
4.7 kΩ	HF45 6470	HF45 6470			
5.1 kΩ	HF45 6510	HF45 6510			
5.6 kΩ	HF45 6560	HF45 6560			
6.8 kΩ	HF45 6680	HF45 6680			
8.2 kΩ	HF45 6820	HF45 6820			
9.1 kΩ	HF45 6910	HF45 6910			
10 kΩ	HF45 7100	HF45 7100			



✻ : Not available

DVR-700

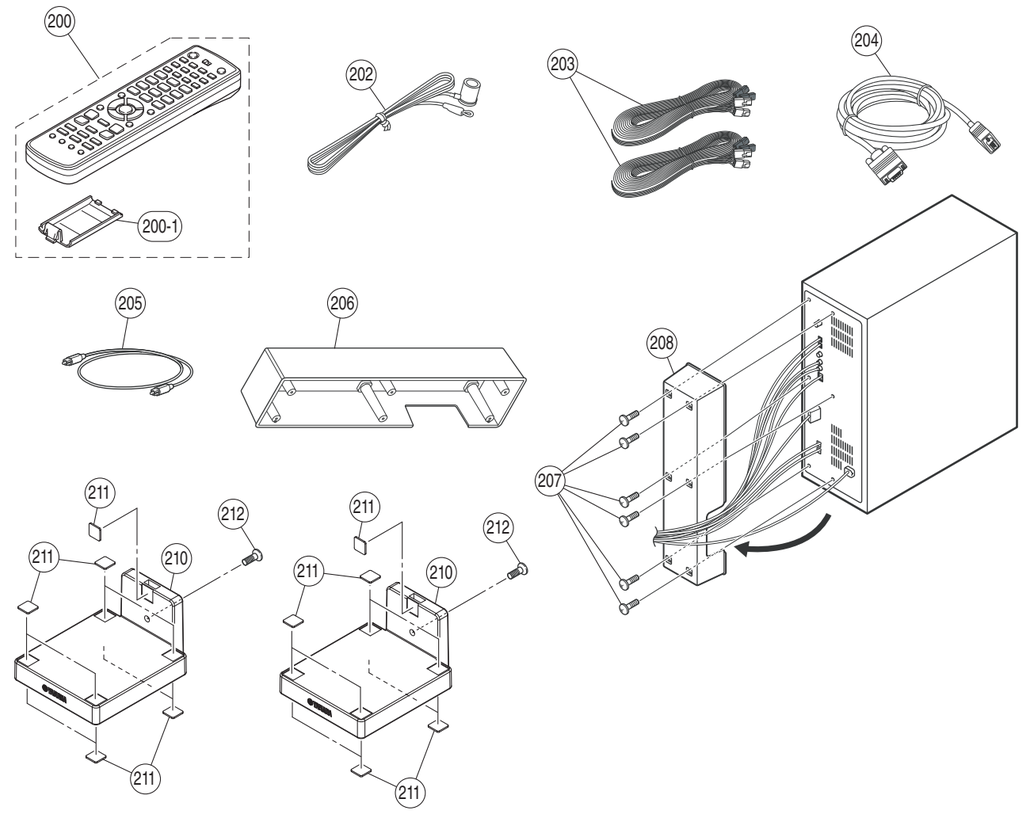
- **OVERALL ASS'Y**



	Ref No.	Part No.	Description		Remarks	Markets
*	1	WQ312700	P.C.B. ASS'Y	FRONT		
*	2	WQ312800	P.C.B. ASS'Y	OPERATION		
*	3	WR645800	DVD MECHANISM UNIT	DSM-2 with CABLE		
*	4	WQ968100	DVD MODULE P.C.B.	DB-VPB801 REGION1		UC
*	4	WQ968400	DVD MODULE P.C.B.	DB-VPB801 REGION4		A
*	4	WQ968200	DVD MODULE P.C.B.	DB-VPB801 REGION2		G
*	4	WQ968500	DVD MODULE P.C.B.	DB-VPB801 REGION5		F
*	4	WQ968300	DVD MODULE P.C.B.	DB-VPB801 REGION3		LV
	10	MFA17100	FLEXIBLE FLAT CABLE	17P 100mm P=1.0		
*	11	MFA05250	FLEXIBLE FLAT CABLE	5P 250mm P=1.0		
*	12	WQ875600	FLEXIBLE FLAT CABLE	27P 100mm P=1.0		
*	21	WQ316500	TOP COVER			UC
*	21	WP949000	TOP COVER			AGFLV
*	23	WP950500	REAR PANEL			
*	26	WP949100	FRONT PANEL			
*	27	WP949400	WINDOW PANEL			
*	28	WP949200	SIDE PANEL L			
*	29	WP949300	SIDE PANEL R			
*	30	WP949500	BUTTON 7P			
*	31	WP949600	BUTTON 1P			
*	32	WP949900	LENS DVD L			
*	33	WP950100	LENS DVD R			
*	34	WP950200	SHEET GUIDE			
*	35	WP950300	LEG	D30, t=3		
*	36	WQ805300	SHEET OPE			
*	37	WQ805400	SHEET FFC			
	50	WE774100	BIND HEAD BONDING B-T. SCREW	3x8 MFZN2B3		
	51	WE774400	BIND HEAD B-TIGHT SCREW	3x8 MFZN2B3		
	52	WF002600	PW HEAD B-TIGHT SCREW	3x8 MFZN2W3		
	53	WF268000	BIND HEAD P-TIGHT SCREW	3x10 MFZN2B3		
	54	V6509600	JACK SCREW	SS6-A47511848		
	55	WE877800	BIND HEAD S-TIGHT SCREW	3x6 MFZN2B3		

※ New Parts

• ACCESSORIES

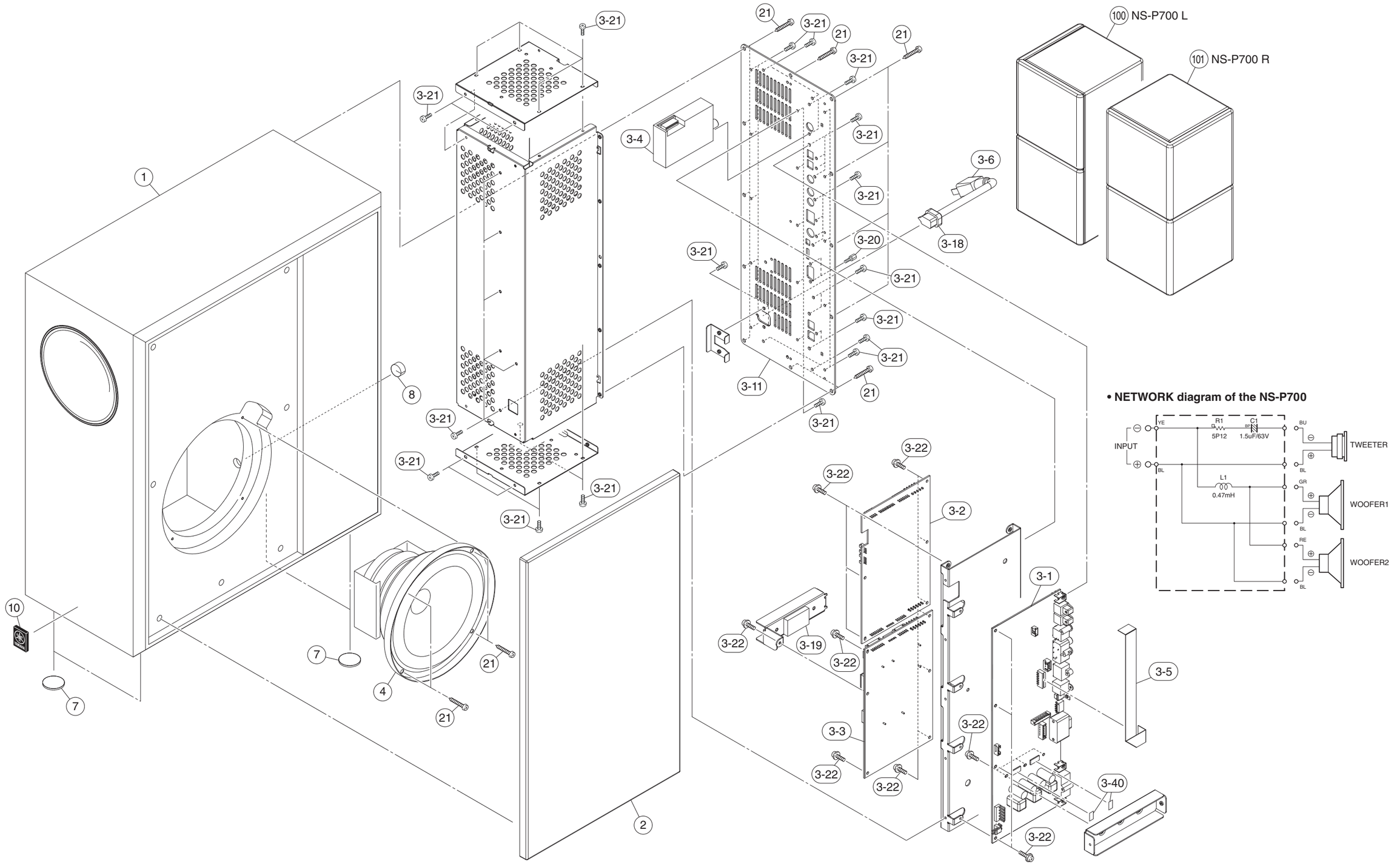


	Ref No.	Part No.	Description		Remarks	Markets
			ACCESSORIES			
*	200	WP870100	REMOTE CONTROL		RRS4001-3901EM	UC
*	200	WP870300	REMOTE CONTROL		RRS4001-3903EM	ALV
*	200	WP870200	REMOTE CONTROL		RRS4001-3902EM	GF
	200-1	AAX57560	BATTERY COVER		103RRS-141-07L	
	202	WB212500	INDOOR FM ANTENNA	1.4m 1pc		UCLV
	202	WB212400	INDOOR FM ANTENNA	1.4m 1pc		AGF
*	203	WQ381800	SPEAKER CABLE ASS'Y	RE,WH 4m 2pcs/set		
	204	WQ107000	SYSTEM CABLE	D-SUB 15P 4m 1pc		
*	205	WQ337300	VIDEO PIN CABLE	1P 1.5m 1pc		
	206	WP106700	COVER for NS-PSW700	1pc		
	207	WE774000	BIND HEAD SCREW for COVER	3x6 MFZN2W3 1pc		
*	210	WP981500	STAND for NS-P700	1pc		
*	211	WP998900	NONSKID PAD for STAND	10x10x1 1pc		
	212	WE980400	BIND HEAD SCREW for STAND	4x10 MFZN2B3 1pc		
			BATTERY	R6,AA,UM-3 2pcs		
			SERVICE TOOL			
		WR492800	RS232C CONVERSION ADAPTOR	with CABLE(9P)		

※ New Parts

NS-PSW700 | **NS-P700**

• OVERALL ASS'Y



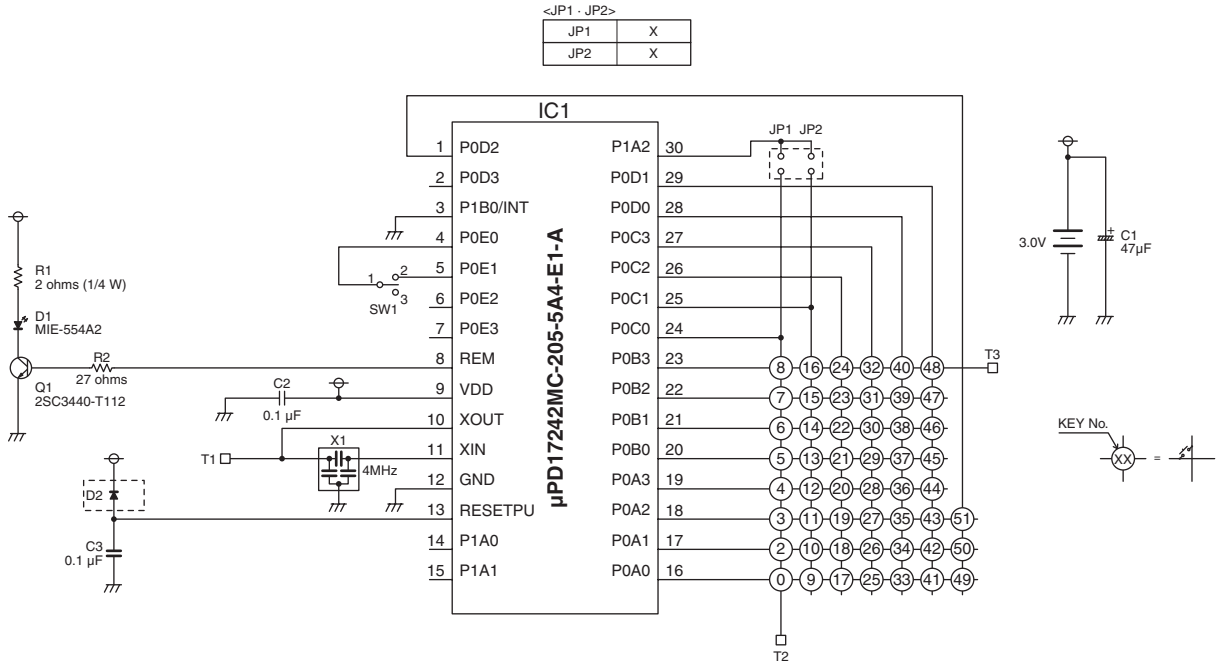
• NETWORK diagram of the NS-P700

	Ref No.	Part No.	Description		Remarks	Markets
	1	WP500000	NS-PSW700 CABINET ASS'Y			
	2	WP500700	SIDE GRILLE ASS'Y			
*	3-1	WQ312300	P.C.B. ASS'Y	MAIN		UC
*	3-1	WQ312400	P.C.B. ASS'Y	MAIN		ALV
*	3-1	WQ312500	P.C.B. ASS'Y	MAIN		GF
*	3-2	WP503000	P.C.B. ASS'Y	SUB		
*	3-3	WP503200	P.C.B. ASS'Y	POWER		UC
*	3-3	WP503400	P.C.B. ASS'Y	POWER		A
*	3-3	WP503500	P.C.B. ASS'Y	POWER		GFL
*	3-3	WP503600	P.C.B. ASS'Y	POWER		V
	3-4	WJ559000	FM TUNER	FAE381-A08N		UCLV
	3-4	WJ559100	FM TUNER	FAE481-E08N		AGF
*	3-5	MF113200	FLEXIBLE FLAT CABLE	13P 200mm P=1.25		
⚠	3-6	WB120500	POWER CABLE	2m		UC
⚠	3-6	WC743700	POWER CABLE	2m		A
⚠	3-6	WB212300	POWER CABLE	2m		GFL
⚠	3-6	WC992700	POWER CABLE	2m		V
*	3-11	WP106800	REAR PANEL			UC
*	3-11	WP107000	REAR PANEL			AGFLV
	3-18	V2438700	CORD STOPPER	10P1		
*	3-19	WP549500	SHEET			
	3-20	V6509600	JACK SCREW	SS6-A47511848		
	3-21	WE774100	BIND HEAD BONDING B-T. SCREW	3x8 MFZN2B3		
	3-22	WF002600	PW HEAD B-TIGHT SCREW	3x8 MFZN2W3		
*	3-40	WQ700200	SHEET	10x20x0.5		
	4	X9866A00	DRIVER WOOFER	16cm 6 Ω	JA16B5	
	7	WM727200	PAD	D25 t=2		
	8	WC739000	BUSHING			
	10	WC788700	EMBLEM 100%			
	21	WF459800	BIND HEAD TAPPING SCREW	4x25 MFZN2B3		
	45	WJ970700	PACKING	45x20		
	51	WF268000	BIND HEAD P-TIGHT SCREW	3x10 MFZN2B3		
*	100	WQ310200	SPEAKER FINAL ASS'Y	NS-P700 L		
*	101	WQ310400	SPEAKER FINAL ASS'Y	NS-P700 R		

* New Parts

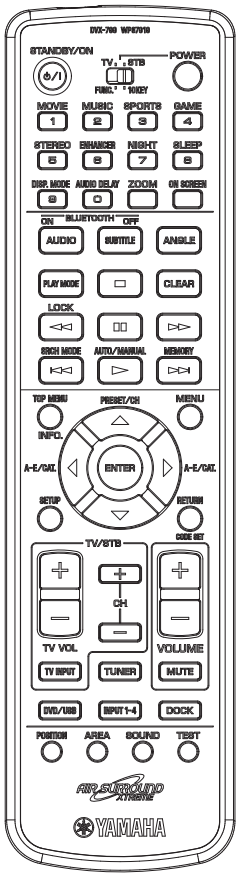
■ REMOTE CONTROL

SCHEMATIC DIAGRAM

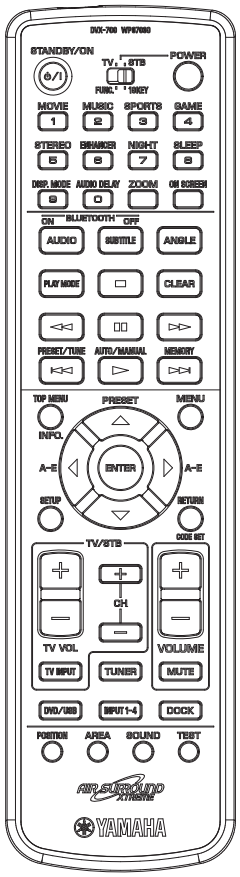


PANELS

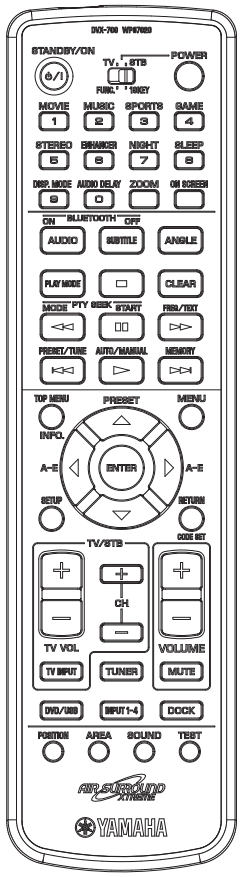
U, C models



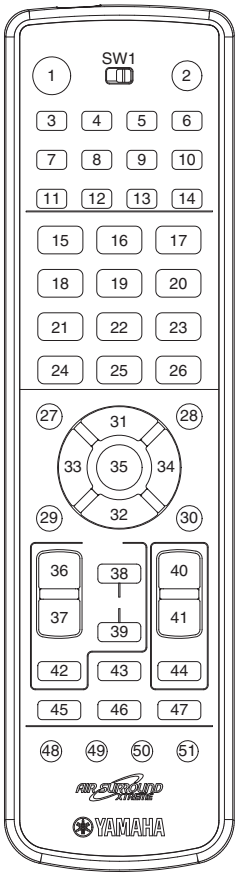
A, L, V models



G, F models



KEY NO. LAYOUT



KEY CODE

Key No.	Function	Code	
		SW1=TV	SW1=STB
1	STANDBY/ON	78-0F	
2	TV/STB POWER	Preset POWER	
3	1 / MOVIE	78-D9	78-11
4	2 / MUSIC	78-DA	78-12
5	3 / SPORTS	78-DB	78-13
6	4 / GAME	78-DC	78-14
7	5 / STEREO	78-9B	78-15
8	6 / ENHANCER	78-CB	78-16
9	7 / NIGHT	78-8A	78-17
10	8 / SLEEP	78-4F	78-18
11	9 / DISP. MODE	78-4E	78-19
12	0 / AUDIO DELAY	78-24	78-10
13	ZOOM	7C-D7	
14	ON SCREEN	7C-A6	
15	AUDIO / BLUETOOTH ON	7C-AD	
16	SUBTITLE / BLUETOOTH OFF	7C-AA	
17	ANGLE	7C-AE	
18	PLAY MODE	7C-BD	
19	■	7C-85	
20	CLEAR	7C-9F	
21	◄◄ / LOCK	7C-86	
22	▮▮	7C-83	
23	►►	7C-87	
24	⏮ / SRCH MODE	7C-B9	
25	► / AUTO/MANUAL	7C-82	
26	⏭ / MEMORY	7C-BA	
27	TOP MENU / INFO.	7C-B1	
28	MENU	7C-B2	
29	SETUP	7C-AC	
30	RETURN / CODE SET	7C-B7	
31	▲ / PRESET/CH	78-8E	
32	▼	78-8F	
33	◄ / A-E/CAT.	78-9F	
34	► / A-E/CAT.	78-9E	
35	ENTER	78-C1	
36	TV/STB / TV VOL +	TV VOL +	
37	TV/STB / TV VOL -	TV VOL -	
38	TV/STB / CH +	Preset CH +	
39	TV/STB / CH -	Preset CH -	
40	VOLUME +	78-1E	
41	VOLUME -	78-1F	
42	TV/STB / TV INPUT	TV INPUT	
43	TUNER	78-4B	
44	MUTE	78-9C	
45	DVD/USB	78-4A	
46	INPUT1-4	78-49	
47	DOCK	78-D0	
48	POSITION	78-23	
49	AREA	78-21	
50	SOUND	78-84	
51	TEST	78-5F	

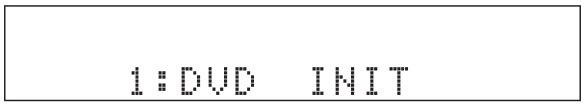
■ SYSTEM MENU

This feature allows you to initialize the settings (such as DVD setting) or change the HDMI audio output settings by opening a specialized menu (system menu) for this purpose.

① Set the system to standby mode.

② Press and hold **INPUT** and ▯▯ on the DVD controller, then press **STANDBY/ON**.
Keep holding **INPUT** and ▯▯ until "SYSTEM MENU" appears in the front panel display.
The system menu appears on the front panel display.

③ Press ◁ / ▷ to select the item you want.



1:DVD INIT
Resets the settings for DVD settings to the initial factory settings.

2:HDMI INIT
Resets the settings for HDMI settings to the initial factory settings.

3:HDMI A ON
Select if the audio signal is output from the HDMI terminal. Select [ON] to output the audio signal to HDMI components such as TV.

4:HDMI A OFF
Select if the audio signal is output from the HDMI terminal. Select [OFF] not to output the audio signal to HDMI components such as TV.

5:SIRIUS P.CLR
(U.S.A. and Canada models only)
Clears the parental lock code for the SiriusConnect tuner.

④ Press **ENTER** to confirm.
"*" is displayed on the left side of the selected item in the front panel display.
Each time you press **ENTER**, set (asterisk "*" appears) and cancel (asterisk "*" disappears) switches in sequence.
The settings will be activated the next time you turn on this unit. Press **STANDBY/ON** to set the system to the standby mode, then turn on the power again.

Hints

– If you select other items before the system is set to the standby mode, the item you confirmed is canceled.

– The next time you turn on the system after selecting an item between 1 and 4 in the system menu, the system starts with DVD as an input source.

MEMO

DVD CONTROLLER DVR-700

SUBWOOFER / SYSTEM CONTROL NS-PSW700

SPEAKERS NS-P700

YAMAHA

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